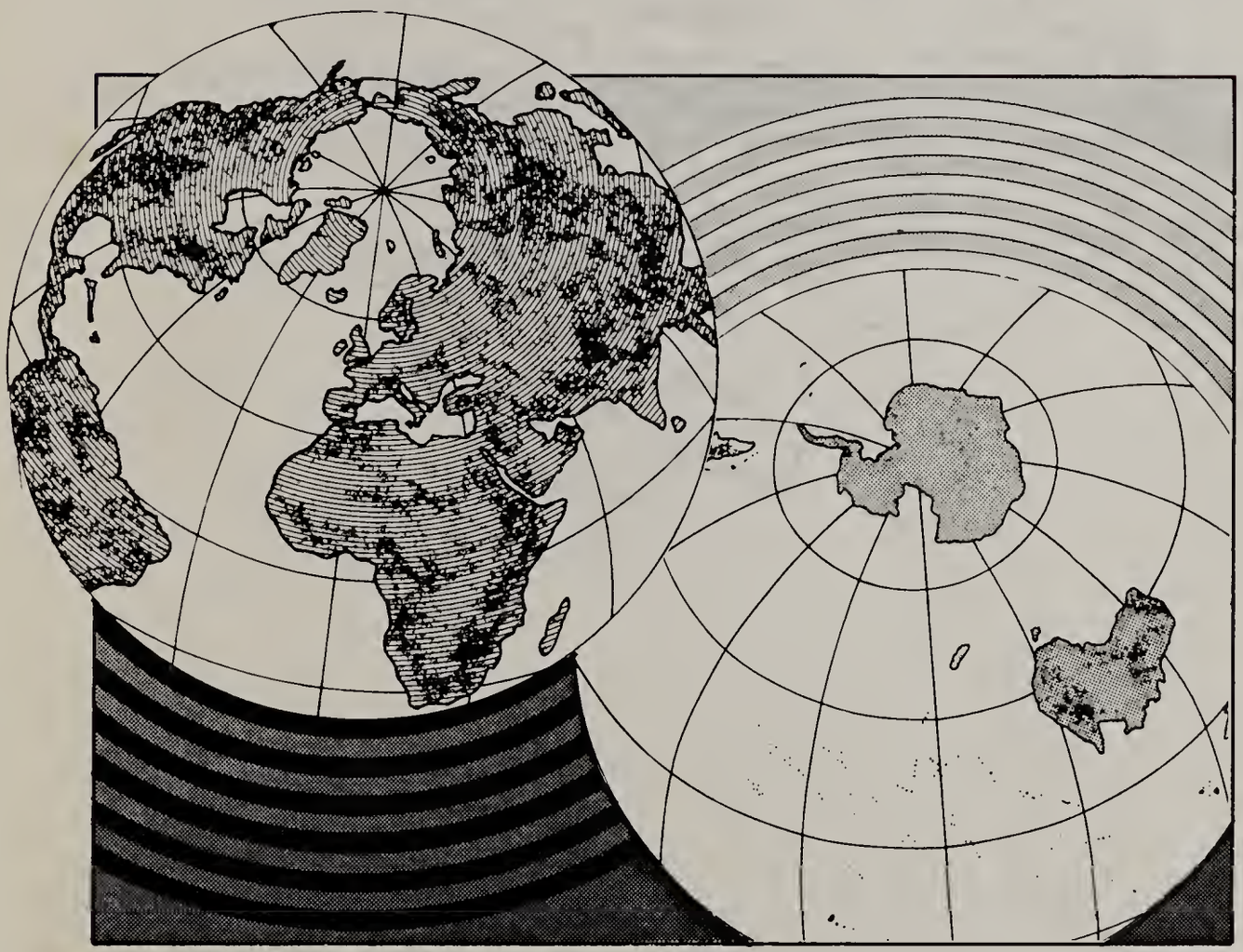
Supplement 6 to WAS-15

People's Republic of China Agricultural Situation

Review of 1977 and Outlook for 1978



UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMICS, STATISTICS, AND COOPERATIVES SERVICE
APPROVED BY THE WORLD FOOD AND AGRICULTURAL OUTLOOK AND SITUATION BOARD

FOREWORD

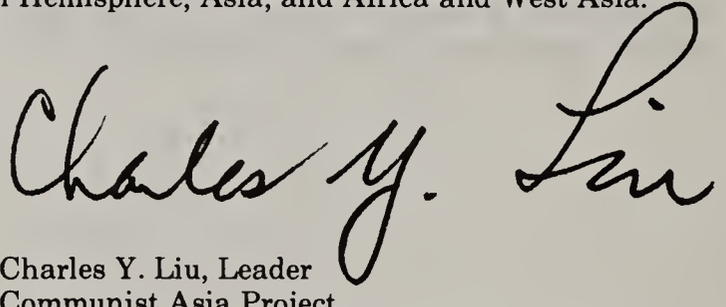
This report summarizes major agricultural developments in 1977 and the outlook for 1978 for the People's Republic of China (PRC).

The report updates and supplements statistics and other information found in Foreign Agricultural Economic Report No. 137, *People's Republic of China Agricultural Situation. Review of 1976 and Outlook for 1977.* Sources are not given in the report but are available on request.

The agricultural situation for 1977 in the Mongolian People's Republic, Kampuchea (Cambodia), Laos, North Korea, and the Democratic Republic of Vietnam is discussed in the situation report for Asia.

Frederic M. Surls directed and coordinated preparation of this report. Authors of the report are Marion R. Larsen, Charles Y. Liu, Frederic M. Surls, and Carolyn L. Whitton. Assistance from Effie S. McConkey, Patricia S. Lewis, and Linda E. Bailey is greatly appreciated.

Other agricultural situation reports have been published for the USSR, Eastern Europe, Western Europe, the Western Hemisphere, Asia, and Africa and West Asia.



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CONTENTS

LIST OF TABLES

Appendix

People's Republic of China

Review of 1977 and Outlookfor 1978

SUMMARY

In 1978, agricultural production in the People's Republic of China (PRC) is expected to improve over the reduced 1977 harvest unless weather further deteriorates. Thus far, weather for over-wintering crops (crops planted in the fall for spring harvest) has been better than in 1977. Despite recent high temperatures and developing drought in areas of northern China, output of over-wintering crops, particularly wheat, should be above 1977 levels. Growing conditions have also been generally favorable for early rice, the largest of the rice crops. Rice crop prospects are further improved by the rapid expansion in plantings of a recently introduced hybrid. Prospects for the year are also enhanced by political stability, new policy emphasis on increasing agricultural production, and increased supplies of inputs.

In calendar 1978, the PRC will continue to import high levels of agricultural products, mainly to offset the reduced 1977 harvest. Imports of grains, cotton, and edible oils will be at unusually high levels, while sugar imports are expected to drop below the 1977 record. The level of soybean imports during the year is uncertain, but soybean exports are likely to remain at the depressed levels of the past 2 years. China's rice exports will rise from 1977 levels, perhaps to more than 1 million tons.

Agricultural production in 1977 was reduced primarily because of a cold winter and severe drought through early spring in major growing areas. Heavy rains in late spring and early summer further damaged crops in central China. Although production of over-wintering crops, particularly wheat, was most seriously affected, growth of early rice and planting of some fall crops was also hindered. Production for the year was spared more serious damage as weather improved in summer and fall. Also, the improved water control and irrigation system and the mobilization of large amounts of labor for watering crops and other field activities in weather damaged areas limited the effects of the drought.

Although the drop in agricultural production in 1977 was small, this was the third consecutive year of stagnant or declining production of major crops. Production and domestic supplies dropped further behind the growth of domestic demand.

In 1977, total grain production, excluding soybeans, was estimated at 270 million tons, 2 million tons below the 1976 level. Of the major grains, wheat was most severely affected, as production dropped an estimated 4.5 million tons to 40.5 million tons for the year. Rice production increased slightly, rising an estimated 1 million tons to 126.5 million tons, mainly because of a good-to-excellent late rice harvest.

Production of miscellaneous grains remained at the estimated 1976 level of 76.5 million tons. But, production of tubers, planted widely as a catch crop (a substitute crop planted due to failure of the main crop) in weather-damaged areas, was up an estimated 1.5 million tons. With slightly reduced grain production and continued population growth, per capita grain availability in 1977 dropped slightly, despite higher import levels during the year.

Soybean production was up somewhat in 1977, rising 500,000 tons to an estimated 9.5 million tons. This increase resulted primarily from good weather in Northeast China. Tobacco and tea were the only other major crops whose production was reported

by the PRC to be up for the year. Cotton production dropped 7 percent to 2.2 million tons. Production of all major oilseeds was down. Peanut production dropped sharply and production of rapeseed, sesame, and cottonseed also fell. Sugar production was also down for the year.

Little progress was made in the livestock sector during the year.

Gains were registered in most agricultural inputs during 1977, with a particularly large advance in fertilizer production. Reportedly, production was up by 30 percent over the 1975 peak; fertilizer imports were also up significantly. Agricultural machinery production rebounded from its poor 1976 performance. Progress in farmland capital construction slowed somewhat, however, as labor was shifted to fighting drought during spring. Also, because of the drought, emphasis in construction work temporarily shifted to improving existing irrigation systems.

Although there was little progress in agricultural production during the year, considerable progress was made in firming up national priorities and reasserting the importance of agricultural development to the national economy. By early 1978, it was clear that new long-term plans gave high priority to accelerated growth in agriculture and increased state investment in agriculture. The most striking goal revealed in the new 10-year economic plan was the 1985 target of 400 million tons of grain, doubling past rates of growth.

China's foreign trade during calendar year 1977 showed the first significant increase in 3 years. The PRC trade surplus was about $1 billion for the second consecutive year. Policy statements during the year emphasized the importance of imports to accelerating economic growth and modernization, but the primary focus was on imports of industrial goods and technology.

In calendar 1977, agricultural imports were up sharply, nearly doubling 1976 imports in value. Increases were recorded in all major import categories, with record levels for wheat, edible oils, and sugar. Grain imports (all wheat) during calendar 1977 reached 6.9 million tons, more than triple the 1976 level. At the same time rice exports dropped to an estimated 700,000 tons, the lowest level since the early 1960's. Cotton imports continued at fairly low levels early in the year, but accelerated sharply as the 1977/78 marketing year began.

Imports of soybeans were up sharply. totaling 362,000 tons on the year. PRC soybean exports dropped to approximately 115,000 tons as the PRC became a net importer for only the second time since 1949. Edible oil imports reached a record level estimated at 159,100 tons—nearly all was soybean oil. In addition, slight increases were recorded in imports of coconut and palm oils and of tallow.

This surge in imports during 1977 appears to have resulted primarily from a combination of sluggish agricultural performance, low world market prices for many commodities, and easing payments pressures. There was no indication of a basic change in agricultural trade policies.

The United States resumed significant sales to China during 1977. The value of agricultural exports totaled $65.8 million, up sharply from the miniscule $44,000 exported in 1976. Major items shipped during 1977 were cotton (12,200 tons), soybeans (55,000 tons), and soybean oil (61,800 tons). The increase in agricultural exports was the cause of the 27-percent rise in total U.S. exports to the PRC during 1977. Shipments of nonagricultural products were down on the year. The resumption of U.S. agricultural sales in 1977 seems to have resulted from the high level of PRC agricultural imports rather than from a change in China's apparent policy of treating the United States as a residual supplier.

During 1977, U.S. agricultural imports from the PRC continued their steady increase, reaching $67.1 million. Of total U.S. imports from China, one-third was in agricultural products. The leading agricultural import category continued to be feathers and down which totaled $19.0 million, or 28 percent of all U.S. agricultural imports from the PRC during 1977.

AGRICULTURE RECEIVES HIGH PRIORITY IN NEW PLANS

During the past 18 months, a long-standing log-jam in Chinese economic policy has been broken, resulting in a torrent of revised economic policies. Changes have occurred not only in the direction of economic policy, but also in the relative detail and volume of what is being revealed. What is now available leaves no doubt that the present leadership under Party Chairman Hua Kuo-feng is going all out to strive for rapid economic development by modernizing agriculture, industry, national defense, and science and technology in order for China to reach the rank of world super-economic power by year 2,000—a goal earlier announced by the late Premier Chou En-lai to the Fourth National People's Congress (NPC) in 1975.

The first revisions in economic policy trickled out during the period from October 1976 to summer 1977 in the form of national conferences in most key economic sectors (see table 1 for agriculturally related events). The major themes and details of the new agricultural policies were explained in two key speeches: The speech given by Vice Premier Yu Chiu-li to the Third National Conference on Agricultural Mechanization on January 26, 1978 and Chairman Hua's speech to the Fifth National People's Congress on February 26, 1978.

A clear indication of an important role for agriculture in the PRC's economic development scheme was contained in the speech on agricultural mechanization by Yu in January 1978. The speech by Hua to the Fifth NPC explicitly marked economic growth as the most pressing issue facing China and identified agricultural development as the key to growth.

A 10-year economic plan (1976-85), originally drafted in 1975, was presented to and adopted by the Fifth NPC. Until this plan was adopted, China had been operating without a long-term economic plan since 1975 when the Fourth Five-Year Plan ended. So far, the text of the new plan has not been released, but its goals, targets, and plans for the economy and agriculture can be glimpsed in the speeches by Hua and Yu. A long and explicit list of agricultural targets and plans was presented (tables 2 and 3).

During the 10-year plan period there will be increasing demands on the agricultural sector to feed a growing population, to provide labor, raw materials, and capital accumulation, and to generate increasing farm exports. The pledge by the leadership to upgrade the standard of living has also increased demands on agriculture.

To meet these demands, the plan calls for grain production of 400 million tons by 1985—43 percent above the 1977 level—and for the gross value of agricultural output to increase by 4-5 percent in each year between 1978 and 1985. To achieve these overall supply goals, more detailed subtargets, including 70 percent and 85 percent mechanization of agriculture by 1980 and 1985, respectively, and one hectare of guaranteed stable high-yield farmland for each 15 persons in the rural sector, were set.

Plans and measures designed to achieve these ambitious supply and demand requirements range from those dealing with the physical aspects of increasing agricultural production, to those dealing with agricultural inputs in increasing yields, to those dealing with planning, management, decisionmaking, and incentives.

A review of these targets, plans, and measures raises several points worth noting. To begin with, reversing the practice since the Great-Leap-Forward, the two speeches discussed China's economic policies and targets and plans not in general terms, but in explicit language—percentages and numbers. This is one sign of the leadership's determination to put China back on the road to economic growth and of a confident, pragmatic approach to economic planning, despite the danger of leaving less room to maneuver in case these targets are not met.

Agriculture apparently received the greatest emphasis in the 10-year plan. "Agriculture first" has been a major principle of Chinese economic policy since the early 1960's. Before Hua's speech to the Fifth NPC, it was not clear how agriculture would rank with industry and national defense. It appears now that the agricultural sector is still considered to be as important as the industrial sector. The new plan appears to increase state appropriations for agriculture, particularly for farmland capital construction. The plan's budgetary allocation for 1978-85 is targeted to equal the total for the past 28 years. Reinvestment in agriculture of local revenues is also stressed.

Both the overall plan for agriculture and many of its individual targets seem too ambitious. Individually, for example, the target of 400 million tons of grain by 1985 implies an annual compound growth rate in excess of 4 percent. PRC total grain production increased at an annual compound rate of about 2.8 percent for the period 1949-76, starting from a low base in 1949. The rate for 1970-76 was about 2.4 percent per year.

The projected annual increase of over 4 percent appears at best to be at the upper limit of the feasible range. It could be achieved only if all the necessary "if's" are realized for 1978-85:

—If weather is unusually favorable to crop production;

—if chemical fertilizer supplies significantly sur-

Table 1--Selected PRC events relating to agriculture, December 1977 to April 1978

Event	Date
Second National Conference on Learning from Tachai	December 1976
National Conference on Basic Construction	March 1977
National Conference on Supply and Marketing Cooperatives	April 1977
National Conference on Learning from Taching in Industry	April 1977
National Conference on Summer Harvest, Planting and Field Management	June 1977
National Conference on Cotton Production	June 1977
National Conference on Farmland Capital Construction	July & August 1977
National Conference on Learning from Taching and Tachai in Foreign Trade	July 1977
Conference on Rice Production in South China	July 1977
Chairman Hua's instructions on expansion for large-scale mechanized hog and poultry operations	October 1977
Vice Premier Yu Chiu-li's speech on economic development and planning	October 1977
Wage increases for over 60 percent of urban workers	November 1977
National Conference on State Farms	January 1978
Third National Conference on Agricultural Mechanization --Vice Premier Yu Chiu-li's speech on mechanization	January 1978
Fifth National People's Congress --Adopts 10-year economic plan (1976-85) --Chairman Hua's speech on economic development targets and plans	February 1978
National Science Conference	March 1978
National Education Conference	April 1978

Table 2--Major economic and agricultural goals and policies 1/

I. ECONOMY, GENERAL

A. Overall Goals

1. Unite and strive to build a modern powerful socialist country (1, D1).

2. Accomplish the comprehensive modernization of agriculture, industry, national defense, and science and technology before the end of century (1, D11).

B. Economic Principles

1. To adhere to the principle of building our country independently, with the initiative in our own hands and through self-reliance, hard struggle, diligence and thrift (3, Chapter 1, article 11, D43).

2. To adhere to the principles of taking agriculture as the foundation and (working) under the unified leadership of the central authorities (3, Chapter 1, article 11, D43).

3. Take grain as the key link and ensuring an all-round economy (1, D14).

4. To uphold "he who does not work, neither shall he eat"; "from each according to his ability, to each according to his work"; to oppose equalitarianism and advocate more pay for more work and less pay for less work (1, D20).

C. Planning, Management, and Decisionmaking

1. To strengthen central planning as well as to pay attention to central and local initiatives and coordination (1, D19; 2, E10).

2. To delineate managerial responsibility clearly and to have a check-up system on performance (1, D20).

3. To increase managerial efficiency in order to improve quality, raise labor productivity, economize use of inputs, cut costs, and increase profits (1, 19).

4. To have dual leadership for research and development of key industries (1, D20).

5. To abolish revolutionary committees at prefectural level and below for the management of communes and brigades, factories, schools, mines, etc., and to set up in its place a system of clear-cut division responsibilities under the party committees (1, D20, D27, D28).

1/ See footnote at end of table 3.

II. AGRICULTURE, GENERAL

A. Ownership

1. Two kinds of ownership of the means of production: socialist ownership by the whole people and socialist collective ownership by the working people--for rural workers (3, Chapter 1, article 5, 41).

2. The rural people's commune sector is a socialist collective ownership by the working peasants. It takes the form of three-level ownership by the commune, the production brigade, and the production team, with the last as the basic accounting unit. A production brigade may become the basic accounting unit when the conditions are ripe (3, Chapter 1, article 7, D42).

B. State Participation

1. From 1978-85, to budget state investments for capital construction equaling the total for the past 28 years (1, D12).

2. To make appropriate increases in the proportion of financial expenditures allocated to investments in agricultural capital construction and to operating expenses, and to make corresponding arrangements for materials and equipments (1, D15).

3. To take charge of large-scale water conservancy projects, to continue to harness such big rivers as the Yellow, Yangtze, Huai, Haiho, Liaoho, and Pearl Rivers, to relieve drought in Northwest, North, and Southwest China, and to divert water from the Yangtze to areas north of the Yellow River (1, D15).

4. To give greater help by the state to poor commune, brigades and teams (2, E12).

C. Local Undertakings

1. To initiate the building of medium-sized and small water conservancy works suiting local conditions (1, D15).

2. To utilize local resources in all provinces, municipalities and autonomous regions to build medium- and small-sized coal fields, power stations, cement and chemical fertilizer plants (1, D17).

D. Agricultural Planning, Management, and Decisionmaking

1. To consolidate commune and brigade enterprises for effective leadership and overall planning by stages and in groups in the next 2 years to make 1/3 of these enterprises reach the Tachai and Taching standard by 1980 (2, E9).

2. To solicit commune members' opinion on farmland capital construction, improving farming methods, plans for planting and increasing production; to adopt measures suitable for local

-continued

Table 2--Major economic and agricultural goals and policies 1/--Continued

conditions; to oppose coercion, commandism and arbitrary orders; and to make public the accounts and finances of communes and brigades (1, D15).

3. To oppose "equalitarianism and indiscriminate requisition" and to favor the exchange of equal value (1, D16).

E. Incentives and Standard of Living

1. 90% of commune members to receive higher income every year (1, D21).

2. To allow commune members to farm small plots of land and/or to keep a limited number of livestock for personal needs and to engage in household side-line production (3, Chapter 1, article 7, D42).

3. To procure with premium for agricultural and subsidiary products and to allow legitimate trade at village fairs (1, D16).

4. To raise the purchase prices of agricultural products and reduce the prices of manufactured goods which are used to support agriculture (1, D20).

5. To apply in communes the system of fixed production quotas, work points for work done, and equal pay for equal work irrespective of sex (1, D21).

6. To strengthen and expand the rural cooperative medical service and barefoot doctor system (1, D24).

7. To supply to communes more consumer goods and building materials (2, E12).

III. AGRICULTURAL PRODUCTION, REQUIREMENTS, AND INPUTS

A. Production

1. By 2,000 to reach or surpass advanced world levels in the output per unit of the major farm products (1, D11).

2. By 1985, to produce 400 million metric tons of grains, and in each year from 1978 to 1985, to increase the value of agricultural output by 4 to 5 percent (1, D12).

3. To establish commodity bases for grains (12), cotton, edible oil, sugar, other cash crops, forest, livestock and fishery, and to set up more state farms and run them efficiently (1, D14, D16).

4. To transform low-yield, grain deficient areas to self-sufficiency or with a surplus within 2 or 3 years (1, D14).

6. By 1980, to promote one-third of about 2,100 countries to the level of Tachai-type countries (1, D13).

7. For each member of the rural population by 1985, to provide one mou of farmland with guaranteed stable high yields irrespective of drought or waterlogging (1, D12).

8. To organize planned reclamation of wasteland by the state farms and communes (1, D14).

B. Requirements

1. To give workers higher wages step by step, to increase the supply of non-staple foodstuffs for urban consumers, to set up in cities and industrial centers production of non-staple foodstuffs, and to set up mechanized and semi-mechanized livestock farms (1, D21).

2. To increase grain reserves (2, E11).

3. To lower the population growth rate to less than one percent within 3 years (1, D25).

4. To expand exports of agricultural products by building supply bases (1, D18).

C. Fertilizer and Insecticides

1. To utilize local resources by provincial-level units to develop medium- and small-size chemical fertilizer plants (1, D15; 2, E12).

2. To increase chemical fertilizer annual output in 1980 to 58% over the 1977 level (2, E7).

D. Science, Technology, and Education

1. To set up and perfect a system of agro-scientific-technical research and popularization, to stress cultivating and popularizing fine strains of seeds, to improve farming methods, and to explore various sources of fertilizer (1, D15).

2. To achieve compulsory eight-year education in the rural areas by 1985 (1, D23).

E. Mechanization

1. By 1980, to achieve 70% basic mechanization of the major agricultural forestry, animal husbandry, sideline production and fishery operations (4, E7; 2, E11). (Also, see table 3.)

2. By 1985, to achieve 85% mechanization in all major processes of farm work (1, D12).

1/ See footnote at end of table 3.

Table 3--Goals and plans for agricultural mechanization 1/

Goals and targets	Plans
By 1980, to achieve 70% basic mechanization of major agricultural, forestry, animal husbandry, sideline production and fishery operations. (4, E7; 2, E11) More detailed 1980 targets include: --large and medium-size tractors to increase by 70% over the present figure; --machine-drawn farm implements to increase by 110%; --hand-guided tractors to increase by 36%; --drainage and irrigation machines to increase by 32%; --fairly large increases in production of machines for farmland and capital construction, plant protection, transportation, harvesting, and agricultural processing machines; --the state supply of steel for manufacturing and repairing farm machines for 1978-80 to increase 50% over 1975-77; --local supply of steel for agriculture and farm machines to increase to over 40% from the present about 30%; --the amount of gasoline supplied by the state for agricultural mechanization to be 1.2 times higher than 1977; --the current number of personnel capable of operating, maintaining, repairing and managing farm machines to double; --over 90% of the farm machines to be in good working condition; --over 80% utilization rate for farm machines in farm operations including agricultural transportation; and --fuel and power consumption to be greatly reduced. (2, E7-E8)	Plans to achieve 70% farm mechanization by 1980: By narrowing the technological gap between agriculture and industry: (4, E10) By correcting the problems of: --noninterchangeability of parts; --nonspecialization of farm machine production; --noncoordination between production and marketing; --maintenance and managing lagged behind the production of farm machines; --farm machines not fully utilized in commune; Through: --standardization, serialization and multi-purpose use of farm machinery; --improvement of coordination in machine usage; --establishment of county maintenance and repair centers; --coordination of provincial production and the need for farm machines in commune enterprise, agricultural production, supply and marketing; --scientific research on agricultural mechanization and specialization of farm machine production; --quality first; --producing spare parts and accessories as well as farm machines; --increase local fuel power and raw materials production for farm machinery needs; and --reducing by 20% the costs of farm machines to farm producers by 1980. (4, E12; E21)

1/ Numbers in parentheses refer to the following sources:

1. Chairman Hua Kuo-feng's speech to the Fifth National People's Congress, February 26, 1978, FBIS #45, 3/7/78, D1-D38.
2. Vice Premier Yu Chiu-li's speech to the fourth session of the Standing Committee of the Fourth National People's Congress, October 24, 1977, FBIS #205, 10/25/77, E6-E12.
3. The Constitution of the People's Republic of China (as adopted by the 5th NPC), FBIS #45, 3/7/78, D35-D39).
4. Vice Premier Yu Chiu-li's speech to the Third National Conference on Agricultural Mechanization, January 26, 1978, FBIS #21, 1/31/78, E6-E25.

pass the past level not just for nitrogenous, but also for the phosphate and potassium fertilizers currently in short supply;

—if yields are raised significantly for wheat, rice and corn through development of improved seed varieties;

—if agricultural chemical supplies are greatly increased to reduce insect and pest damage to crops;

—if the agricultural mechanization, farmland capital construction, and water conservancy plans are accomplished;

—if every person in the rural sector responds to the call of ideology and other incentives;

—if all the central planning, state-local coordination, managerial accountability, and marketing processes are better coordinated than in the past;

—and if present political stability and the momentum for economic progress are maintained.

When looked at in its entirety, the 10-year economic plan calls for rapid growth of every sector in the economy. Each part of the whole scheme requires massive infusions of capital, resources, manpower, and modern technology. Although the export aspect of foreign trade did not draw much attention in Hua's speech, the prospects for a significant take-off of Chinese exports are not good. In addition, foreign capital infusion is not to be expected. Therefore, how the economic planners in China will face the basic question of rationing resources between competing sectors is not clear. (*Charles Y. Liu*)

AGRICULTURAL PRODUCTION DROPS

The year 1977 was one of recovery for many sectors of China's economy. In agriculture, however, performance was disappointing, as production showed no significant increase for the third consecutive year and fell further behind the growth of demand. Official evaluations of overall agricultural performance characterized the harvest as "fairly good". This is a cautious assessment by past standards and the absence of more specific yearend claims indicates stagnant or declining production for many crops.

The basic problem during the year was weather, which presented particularly serious problems early in the year following a cold, dry winter. A yearend Chinese report summarized the year as follows: "China is invariably hit by this or that natural disaster every year. This year was one of the worst in the 28 years since liberation in terms of magnitude of natural disasters and total affected hectarage. ...The spring drought was on a scale rarely seen in the past two decades. In most parts of China, rain and snow were scarce up till spring. Exceptional cold hit some parts of northern China and areas south of the Yangtze in January and February. ...On the whole, the temperature in most parts of China from January to June 1977 was lower than average and this affected crop growth." Additionally, once the drought broke in late spring, heavy rainfall in central China further damaged summer harvested crops and disrupted planting of some fall crops.

Had these conditions persisted throughout the year, production would have been much more severely affected. But, adequate rainfall in most areas from late spring on and improved growing conditions throughout the fall resulted in generally good fall crops, although some pockets of serious weather damage remained. This improvement in the fall harvest held the overall decline in production of many crops to a minimum.

The limited decline in agricultural production during the year in the face of severe weather problems illustrates the growing role that China's improving irrigation and water control system is playing in reducing weather-induced fluctuations in crop yields. It also illustrates the important role that large-scale labor mobilization plays in dealing with problems as they arise.

Production of grain, People's Republic of China, 1973-77[1]

Year	Total	Rice	Wheat	Miscellaneous grains[2]	Tubers (grain equivalent)[3]
	Million metric tons				
1973	250.0	118.0	35.0	73.0	24.0
1974	265.0	127.5	38.0	74.5	25.0
1975	270.0	126.5	41.0	77.5	25.0
1976	272.0	125.5	45.0	76.5	25.0
1977	270.0	126.5	40.5	76.5	26.5

[1] Revisions based on new information. See previous issues of this report for earlier estimates. [2] Miscellaneous grains include corn, barley, millet, kaoliang (sorghum), oats, rye, buckwheat, other minor grains, and pulses. [3] A derived figure of one unit of grain to four units of tubers.

Grain Output Off

The official assessment of 1977 total grain output claimed only a "fairly good grain harvest" for the year.[1] This is interpreted to mean that the crop was not as good as that of the previous year. Total grain production, excluding soybeans, is estimated at 270 million tons, about 2 million tons, or about 1 percent, less than the revised USDA estimate of 272 million tons (up from 267 million tons) for 1976.

Provincial yearend reports support the national assessment of reduced grain production. Only 13 of China's 29 provinces, municipalities, and autonomous regions claimed increases in total grain production in 1977 (see appendix table 1). Of the four major grain producers that recorded increases, Szechwan and Heilungkiang claimed a 10-percent increase and Kwangtung and Honan indicated only that total grain production exceeded that for the previous year. On the other hand, nonreporting by large grain producers, including Shantung, Anhwei, Kiangsu, Hopeh, and smaller producers (Shensi, Shansi, Chekiang, Hupeh, and Kwangsi) probably indicates sustained losses for the year.

Of the major grains, wheat output was down substantially following a record in 1976. Rice is estimated to have registered a slight increase following 2 years of decline, and miscellaneous grains —up in some areas but down in others—were about even with the 1976 level. As is typical in years of severe weather, tuber crops replaced some failing cereal crops as catch crops, boosting tuber production for the year.

There is little doubt that increased substitution of miscellaneous grains and tuber crops for traditional main crops, and the increased availability of irrigation facilities and other inputs, prevented an agricultural disaster in 1977. Similar drought conditions in the early 1960's resulted in a sharp decline in grain production.

Wheat Declines

Production of wheat, China's second most important grain after rice, was reduced substantially by unfavorable weather in the fall of 1976 and in the winter and spring of 1977. Production was down 10 percent in 1977 from an estimated record 45 million tons in 1976. The loss was due to lower yields of winter wheat which had a poor start in the dry fall of 1976. Cold damage during the winter and spring and the 1977 spring drought reduced both yields and harvested acreage, especially on late planted areas. Efforts were made to recoup losses by expanding the spring-sown wheat area. Areas not regained by spring-sown wheat were planted to other fast maturing crops which were planted after the weather improved in late spring 1977.

Essentially, all the major provinces producing over-wintering wheat had smaller wheat crops. However, most provinces in the southern portion of the country, where wheat grows during the winter, registered an increase, particularly Kwangtung, which has continued to increase its winter crops.

Although the spring-sown wheat crop was planted on an increased acreage under more favorable conditions, particularly in Heilungkiang Province, its increased yield was not sufficient to compensate for the large loss of the over-wintering wheat crop in the major producing areas in the north.

Rice Up Slightly

China's rice crop was up only slightly in 1977, as unfavorable weather hampered the crop through much of the growing season. The total crop (comprised of the early, intermediate, and late crops) is estimated at 126.5 million tons, about 1 percent larger than the 1976 crop.

In recent years, the early rice crop has replaced the intermediate rice crop as the most important rice crop and also as the most important single grain crop in China. A recent official analysis of the various rice crops allowed a breakdown of acreage and production of the total rice crop in 1976 as follows:

Rice production by crop, PRC, 1976

	Area	Yield	Production
	Mil. ha.	*Tons/ha.*	*Mil. tons*
Early rice	13.3	3.77	50.20
Single crop (intermediate)	10.0	4.01	40.10
Late rice	12.7	2.79	35.20
Total	36.0	3.49	125.50

Scattered and conflicting provincial reports permit no conclusive estimate of the early rice crop. Major producers, such as Kwangtung, Fukien, Hupeh, Chekiang, Kwangsi, and smaller producers, including Kweichow and Fukien, indicated early rice production equal to or slightly larger than the 1976 crop. However, reports of early rice from Anhwei, Kiangsu, Kiangsi, Hunan, and Kirin suggest that the early rice crop in those areas was probably down.

Three separate national broadcasts during September stated that (1) production of early rice is

[1]The initial claim broadcast on December 27, 1977, was of a grain crop equal to that of the previous year. Official reports since then have used only "fairly good grain harvest" in assessing the 1977 grain crop.

estimated to be equal to the best ever achieved; (2) estimates from various parts of the country indicate a total production of early rice equal to the previous record; and (3) southern China's double crop rice area—13 million hectares—reported an early rice production that reached the previous peak. Thus, on the basis of both national and provincial reports, the early rice crop in 1977 is estimated to be up slightly, at least equal to the 1975 and 1976 crops and perhaps larger, but not more than the previous peak that occurred in 1974.

No national reports were made for the intermediate and late rice crops. Because of the mediocre output of early rice and other early harvested grains, the greatest effort during the year was made to increase the acreage of double cropped late rice to equal that of early rice. There is no indication that this goal was attained, but area was increased. It is also probable that area of intermediate rice was increased as some transplantings of early rice in drought-stricken areas were delayed until better planting conditions were obtained.

Although no official mention was made of the success of either the intermediate or the late rice crop, provincial reports on bumper autumn harvests—which include the two crops—support the probability that the net production of the two crops was up slightly and that the increase was primarily from the late rice crop. Weather conditions, resulting in flooding and waterlogging in central, east, and southwest China during the intermediate rice growing season, affected the crop, probably resulting in some losses. Nevertheless, Szechwan Province, one of the two largest rice-producing provinces, claimed a record harvest from an increased area of intermediate rice. Intermediate rice accounts for 80 percent of the rice area in this province.

Total rice production—a good-to-excellent late crop, an average-to-poor intermediate crop, and probably a slightly increased early crop—is therefore estimated at 1 million tons above the 1976 level.

Miscellaneous Grains Unchanged

The production of miscellaneous grains is estimated to be 76.5 million tons—about the same as in 1976[2]. Although the planted area was larger, yields were down slightly. Any analysis of miscellaneous grain production in 1977 cannot be conclusive because of their complementary role to the major grain crops. This role was especially important in 1977 when production units were forced to replant some over-wintering crop areas affected by below-normal temperatures and the winter-spring drought.

Miscellaneous grains, thus, increased in Kiangsi, Kwangtung, Fukien, and Szechwan Provinces both as the usual crop and as a substitute crop. The extent of these substitutions in terms of total area cannot be ascertained, but it was substantial in some provinces. A balance between the acreages of the various crops can, therefore, only be estimated in general terms.

The summer miscellaneous grains fared better than the winter ones. Dry weather created problems at planting time for the early summer miscellaneous grains; however, planting of the later ones was more successful and areas of these crops (corn, sorghum, and millet) were increased. The above-normal precipitation during the late spring and summer produced good stands in the more northern and western provinces where corn, sorghum, and millet are the major grain crops. Fall drought and an early frost in northeast China somewhat reduced the otherwise very promising harvest. Even so, record harvests were claimed in northeast China. About half of the provinces with increases in grain production in 1977 were located in these areas. These increases compensated in part for losses of grains due to flooding and waterlogging at lower elevations in north, central, and east China.

Tubers Up

Tuber crops produced in China include sweetpotatoes, Irish potatoes, cassava (manioc), and probably some taro. Sweetpotatoes predominate and are grown in almost every province, mostly as a summer crop, but also as a winter crop in South China. Irish potatoes, accounting for no more than 10 percent of total tubers, are restricted primarily to north and northeast China. Because of their adaptability and hardiness, sweetpotatoes have traditionally been the substitute crop planted when other crops have failed. This occurred in 1977, expanding the tuber area. The area was increased in such provinces as Honan, Hunan, and Anhwei in north China, Szechwan and Kweichow in southwest China, and Kwangtung, Fukien, and Kiangsi in south China. Total acreage is estimated to have increased over a million hectares, up to 13.5 million. Total production also increased about 1.5 million tons to 26.5 million. (*Marion R. Larsen*)

[2]Winter miscellaneous grains, sown in the fall and the following early spring and harvested during early summer, include barley, naked barley, oats, buckwheat, and pulses. Summer miscellaneous grains, planted in the spring and early summer and harvested in the fall, include corn, kaoliang (sorghum), and millet.

Table 4--Wheat contracts, People's Republic of China, 1977 1/

Country	Date signed	Amount	Delivery period	Grade	Remarks
		1,000 metric tons			
Argentina	Dec. 1976	200	Feb.-June 1977	Hard, high protein	Signed with National Grain Board.
	Jan.-June 1977	650	Feb.-Oct. 1977	NA	Four separate contracts with private firms.
Australia	Nov. 1976	500	Feb.-June 1977	ASW, prime hard, hard, or utility.	Presumably final purchase under 3-year (1974-76) agreement.
	March 1977	2,000	June 1977-Jan. 1978	NA	1.25 m. t. to be shipped prior to 11/30/77.
	July 1977	3,000	Aug. 1977-Aug. 1978	NA	Terms: 10% down, 20% at 6 mo., 20% at 9 mo., 50% at 12 mo. plus interest.
Canada	Dec. 1976	762	Feb.-June 1977	Grades 1, 2, and 3 Western Red Spring	Last contract of 3-year (1974-1976) agreement. Quantity ± 5%. Terms: 252 on loading, balance plus interest in 18 months.
	Jan. 1977	1,524	March-Dec. 1977	Grades 1, 2, and 3 Western Red Spring	Quantity ± 5%. Terms: 25% on loading, balance plus interest in 18 months.
	May 1977	3,000	Aug. 1977-July 1978	Lower protein levels of grades #1, #2 WRSW; #3 WRSW; limited quantities of #1 Canadian utility.	Quantity ± 5%. Terms: 25% on loading, balance plus interest in 18 months.

1/ Contract data for earlier years can be found in previous issues of this report.

Record Wheat Imports

China's grain purchases in 1977 increased sharply, partly reflecting production problems during the year. Between November 1976 and March 1977 the PRC contracted for 5.5 million tons of grain for delivery during calendar year 1977. Then between late May and early July an additional 6 million tons were purchased, primarily for 1977/78 (July/June) delivery. In all, 11.7 million tons of grain—all wheat—were purchased for delivery during the 19-month period between February 1977 and August 1978 (table 4).

The earlier purchases most likely stemmed from the apparent failure to fulfill the state procurement plan from the 1976 harvest. Growing concern about the 1977 summer harvest and over late harvest prospects were the probable reasons for the subsequent purchases, although China may also have been taking advantage of low world market grain prices to purchase ahead for 1978 import requirements. Unit values on both Australian and Canadian deliveries in the second half of 1977 averaged less than $95 per ton, reflecting low world price levels in late spring and early summer. Due to the political situation, the PRC was probably under more pressure than in previous years to maintain grain consumption levels.

On a calendar year basis, 1977 grain imports reached 6.9 million tons, sharply above the 1976 import level of 2.1 million tons. Wheat imports during 1977 were a record, nearly a million tons above the 1973 record of 6.0 million tons. But, no coarse grains were imported during 1977, so total grain imports for the year were below the 1973 record of 7.6 million tons (table 10). On a split-year basis, 1977/78 (July/June) grain imports may reach 8.8 million tons, a record level for both wheat and total grain imports.

PRC rice exports during 1977 fell to an estimated 700,000 tons, one-third of the record export levels of 1973 and 1974, and 20 percent below 1976 exports. This drop resulted mainly from stagnant rice production and tight domestic rice supplies.

Net imports of grain during 1977 were a record 6.1 million tons, resulting in a 1-percent rise in grain availability (production plus net imports) for the year. Because of population growth, however, per capita grain availabilities declined slightly, the third consecutive drop. Thus, the domestic supply situation for the year was a tight one.

With grain production down in 1977, state procurements from the 1977 crop probably did not increase appreciably over 1976 levels. Consequently, higher-than-normal imports are again expected through 1978. Approximately 4 million tons of wheat will be imported during the January-June period, and total 1978 imports are expected to be approximately 7 million tons.

PRC rice exports are expected to increase in 1978 to over 1 million tons as world market demand and rice prices rise. (*Frederic M. Surls*)

Some Improvement in Soybean Production

Soybeans, a multi-use crop in China, are used extensively for human consumption, for industrial purposes, and in some areas for oil. Partially as a result of the crop's many uses, there is considerable confusion over the current statistical treatment of the crop in the PRC. At the national level, soybeans have on some occasions been treated as a grain, while at other times they have been reported as a separate economic crop. Additionally, a number of provinces have claimed soybeans as an important oilseed crop. However, the last available PRC statistical definition—from the late 1950's—listed soybeans as a separate economic crop. Therefore, based on this definition, soybeans are treated separately here.

Soybean production for 1977 is estimated at 9.5 million tons, still below the peak of 11.5 million tons in 1959, but up slightly over the revised 1976 estimate of 9.0 million tons. As usual, no national or provincial soybean production reports were made in 1977. The crop is estimated to be better than the poor 1976 crop on the basis of improved summer weather in the major producing regions of the north and northeast.

Soybeans have been long neglected primarily because of their low yields and state emphasis on grain production. However, several recent policy statements on soybeans, the first in some years, have stressed increasing soybean yields and the need for producing units to end past practices of neglecting the crop. This seems to indicate a higher priority for soybeans in the future.

Following the poor 1976 harvest, the PRC became a net importer of soybeans for only the second time in history (table 5). A total of 362,000 tons were imported, 307,000 tons from Brazil, and 55,000 tons from the United States. This was a large increase from the 25,000 tons imported, from Brazil only, in 1976.

Soybean exports totaled approximately 115,000 tons, a further decrease from the 180,000 tons exported in 1976. Soybean exports to Japan dropped again from the already low 1976 level to 98,400 tons; about 15,000 tons were exported to Hong Kong and other Southeast Asian countries. The usual exports to Eastern Europe were supplied through a 20,000-ton purchase from the United States that was shipped directly.

Although the 1977 soybean crop improved, 1978 exports to Japan are still behind schedule, indicating the continued tightness of both the grain and oilseed situations in 1978 and the possibility of high import levels again. (*Carolyn L. Whitton*)

Table 5--Imports and exports of soybeans and oilseeds, People's Republic of China, 1971-77

Item	1971	1972	1973	1974	1975	1976	1977 1/	1978	1979	1980
					1,000 tons					
Exports:										
Soybeans	460.0	370.0	310.0	340.0	330.0	180.0	115.0			
Ground nuts	27.0	59.0	48.0	43.0	41.0	50.0	30.0			
Rapeseed 2/	5.0	2.2	0	.1	.1	0	.1			
Sunflowerseed	2.0	2.0	2.5	2.0	3.0	3.0	3.0			
Sesameseed 3/	.9	.4	.5	.8	.5	1.1	2.6			
Castorbean	22.0	14.0	12.5	6.0	5.0	3.0	0			
Palm kernels	NA	NA	22.3	13.6	10.4	NA	NA			
Other, nes. 4/	3.7	1.8	3.2	7.5	4.9	3.5	2.0			
Total	520.6	449.4	399.0	413.0	394.9	240.6	NA			
Total excluding soybeans	60.6	79.4	89.0	73.0	64.9	60.6	NA			
Imports:										
Soybeans	0	2.0	255.0	619.0	36.0	25.0	362.0			
Sesameseed	17.0	34.1	4.9	4.9	4.9	6.0	NA			
Ground nuts	NA	19.8	0	0	0	0	NA			
Total	17.0	55.9	259.9	623.9	40.9	31.0	NA			
Total excluding soybeans	17.0	53.9	4.9	4.9	4.9	6.0	NA			
Net exports:										
Including soybeans	503.6	393.5	140.0	-210.9	354.0	209.6	NA			
Net exports:										
Excluding soybeans	43.6	25.5	34.6	68.1	60.0	54.6	NA			

NA = Not available.

1/ Preliminary.
2/ Including mustard seed.
3/ Including gingelly and teelseed.
4/ Safflowerseed, hempseed, perillaseed, linseed, pumpkinseed, melonseed, and others.

Sources: 1) Oil World Weekly, 2) Partner country trade statistics, 3) ESCS and FAS estimates.

Other Crop Production Mixed

Oilseed Production Drops Again

Despite the PRC's estimate early in the 1977 harvest season of an improved oilseed crop in 1977, yearend reports failed to mention oilseeds, suggesting decreased production for the second consecutive year. The two leading producers of oilseeds, Shantung and Szechwan Provinces, claimed production increases in 1977; but the next five largest producers all mentioned losses or failed to mention oilseeds at all. Total oilseed production for 1977 is estimated to be 4.1 million tons, 5 percent less than the already low 4.3 million tons in 1976.

Production of peanuts, the largest oilseed crop, decreased considerably in 1977. Although oilseed production in Shantung was reported to have increased, no mention was made of an increase in peanut production. Kwangtung, the other leading producer, has not mentioned its final peanut output, nor have any other major producing provinces mentioned theirs.

Rapeseed production also declined in 1977, for the second consecutive year, but by a smaller margin than that in 1976. About 90 percent of rapeseed production is the winter crop, which was adversely affected by the dry winter weather. Winter production was off substantially in the major producing provinces of the south-central area. Hunan, for example, reported that half of its rapeseed was plowed under as green fertilizer. Improved harvests in other major producing provinces, accounting for about 30 percent of the area—Szechwan, the largest producer, Kweichow, Kiangsi, Kwangtung, and Fukien—were not enough to offset declines in the south-central region.

Little was reported on sesame, the remaining major oilseed crop. Early in the year, provinces suffering losses in other oilseeds indicated that sesame might be substituted during the summer. By yearend, however, none of the larger producing provinces had reported increased production. Therefore, 1977 sesame production is also estimated to have declined.

No mention was made of production of minor oilseeds, such as teaseed, castor beans, tung beans, linseed, and sunflowerseed, in 1977. Production of cottonseed, considered an oilseed in other areas of the world, also declined.

In 1977, PRC oilseed exports were somewhat less than usual, reflecting the poor 1976 crop (table 5). An estimated 30,000 tons of peanuts were exported, roughly 40 percent less than peanut exports in 1976. The continued tight supply situation in 1978 should again hold down the level of oilseed exports.

The poor 1976 and 1977 oilseed crops were reflected in 1977 edible oil trade. PRC imports during the year were up sharply, making the PRC a large net edible oil importer for only the second time in history (table 6). A total of 156,900 tons of soybean oil was imported in 1977, of which 61,800 came from the United States. In addition, 2,200 tons of rapeseed oil was imported. Rapeseed oil and peanut oil exports appear to have been well below normal levels. Oil imports in 1978 will depend on the progress of the 1978 oilseed crop, but higher imports and smaller exports could be expected to continue.

Production of major oilseeds, PRC, 1970-77[1]

Year	Sesame	Rapeseed	Peanuts	Total Oilseeds
	1,000 tons			
1970	320	985	2,650	3,955
1971	320	1,225	2,750	4,305
1972	330	1,465	2,450	4,245
1973	320	1,390	2,350	4,060
1974	330	1,320	2,800	4,450
1975	320	1,480	2,700	4,500
1976	320	1,260	2,750	4,330
1977	310	1,235	2,550	4,095

[1] Cottonseed and soybeans are apparently not treated as oilseeds in PRC definitions (appendix table 4).

Trade in industrial-use oils has remained about the same in recent years, and is expected to continue stable. However, tung oil exports were low. About 47,500 tons of coconut oil and palm oil and 60,000 tons of tallow were imported, a slight increase over 1976 levels. Trade in industrial-use oils in 1978 is projected to continue at about the same levels. (*Carolyn L. Whitton*)

Cotton Crop Down

In 1977, the combination of drought followed by heavy rains in major growing areas seriously hampered cotton production. Although a substantial increase in production had apparently been targeted in an unusual number of national and provincial cotton conferences held early in the year, China's 1977 cotton crop is estimated at 2.2 million tons, 7 percent below 1976 production. National yearend crop reports consistently claimed an increase in cotton production. But, later reports indicate a drop in cotton production. Provincial reports also suggest a drop in production. Only seven provinces, all secondary producers and accounting in total for less than 30 percent of national area, have issued unambiguous reports of increased production. None of the major producing provinces have claimed an increase in production.

Cotton production has been a particular disappointment to China in recent years. Production has not risen significantly in any year since 1973 and now stands 14 percent below the 1973 peak.

Cotton use again appears on the increase after a slump in 1976. A record cotton textile output was claimed for the first 7 months of 1977. For 1977 as

Table 6--Imports and exports of fats and oils, People's Republic of China, 1971-77

Item	1971	1972	1973	1974	1975	1976	1977 1/	1978	1979	1980
					1,000 tons					
Edible oil										
Exports:										
Soybean oils	2.0	0	0	0	0.1	0	0.9			
Ground nut oil	11.0	13.0	11.0	14.0	11.0	12.4	5.0			
Rapeseed oil	18.2	17.4	13.9	15.6	10.9	10.8	4.5			
Other, nes. 2/	0.3	0.5	0.3	0.7	0.9	0.8	0.9			
Total	31.5	30.9	25.2	30.3	22.9	24.0	11.3			
Imports:										
Soybean oil	0	10.0	58.0	0	11.0	10.0	156.9			
Rapeseed oil	0	0	0	0	0	0	2.2			
Total	0	10.0	58.0	0	11.0	10.0	159.1			
Net exports	31.5	20.9	-32.8	30.3	11.9	14.0	-147.8			
Other fats and oils										
Exports:										
Cottonseed oil	1.8	8.1	4.5	3.0	5.0	5.0	0			
Castor oil	0.7	0.7	0.7	0.7	0.7	0.7	0.5			
Tung oil	NA	20.1	27.6	22.4	16.4	25.5	15.0			
Lard	57.0	50.3	58.2	52.6	24.6	24.3	45.0			
Other, nes.	NA	0.5	0.2	0.8	0.3	0.4	NA			
Imports:										
Coconut oil	27.4	32.9	15.2	14.3	35.9	20.1	22.4			
Palm oil	NA	7.6	5.2	8.0	8.0	0	25.1			
Linseed oil	NA	NA	14.5	12.7	9.9	10.6	11.4			
Tallow 3/	12.5	59.3	35.7	53.0	48.0	51.0	60.0			

NA - Not available.

1/ Preliminary.
2/ Includes teaseed oil, sunflowerseed oil, sesameseed oil, gingelly seed oil, maize oil, and rice bran oil.
3/ Edible and inedible.

Sources: Oil World Weekly. Partner Country Trade Statistics. FAS and ESCS estimates.

a whole, production of cotton yarn and cloth were reported to be up 12 and 13 percent, respectively.

Growing consumption, probable low stock levels, and falling domestic production are the apparent reasons for a sharp rise in cotton imports during the 1977/78 marketing year. Imports during the year are projected to rise to over 300,000 tons, the highest level of imports since 1973/74 and more than double the 1976/77 import level (table 7). Apparently because of sharply higher total imports, China resumed purchases of U.S. cotton in 1977. Subsequent purchases may also have been influenced by large U.S. supplies and a strong U.S. competitive position. A total of 12,000 tons was shipped during calendar 1977, all in November and December, and U.S. exports during the 1977/78 marketing year could exceed 90,000 tons.

China plans to increase cotton production in 1978 by at least 15 percent. To accomplish this, cotton procurement prices are to increase and more fertilizer will be supplied to cotton producers. A major development in the PRC fiber supply and import picture is growing production of synthetic fibers, which should receive a considerable boost in coming years as several new imported fiber plants come on-stream. (*Frederic M. Surls*)

Sugar Production Falls

No national yearend claim for total 1977 sugarcane and sugarbeet production was made by the PRC, indicating a decline from 1976 levels. Total 1977/78 raw sugar production, which was completed in April, could be off even more than total cane and beet production due to the effect of wet, early summer weather on the sugar content of the cane and beet; however, the high 1977 imports may offset this effect.

Total 1977 cane output, on decreased area, is estimated to be slightly less than that in 1976. Provinces accounting for about 60 percent of the cane area claimed increases; but these increases were not large. Moreover, both area and yield appear down in the nonreporting provinces.

Beet acreage and production are estimated to have declined from their positive 1976 performances. Although production in a third of the beet area increased over 1976, acreage in the remaining areas was off from its high level in 1976, bringing production down despite good yields.

Total imports of raw sugar in 1977 are estimated to be nearly 1.6 million tons, just over the 1961 record and more than twice the 1976 figure. A relatively small quantity of sugar was again exported to third world nations (table 8). The apparent purpose of increasing imports was to rebuild stocks while prices were low on the world market. It is also possible that increased imports were intended to help raise the PRC's low per capita sugar consumption levels; however, there has been no indication by the PRC of such a policy change.

Additional sugar purchases have been made in 1978. Because of decreased 1977 production, sugar imports this year should continue to be above average, but probably not as high as in 1977 unless a significant change in consumption policy has been made. (*Carolyn L. Whitton*)

Tobacco and Tea Production Up

Tobacco—At the end of 1977, the PRC reported that tobacco production increased over the 1976 level. However, later statements claimed only that the flue-cured harvest was "fairly good," indicating a possible decrease in flue-cured production. The improvement in the 1977 total tobacco harvest is largely due to big increases in production of native-types of tobacco.

PRC exports of tobacco are estimated to have continued to increase in 1977. However, 1978 tobacco exports may level off in view of the questionable 1977 flue-cured production.

Tea—In 1977, output of tea in the PRC increased over the 1976 level. Following a good spring harvest, which produced the largest portion of the total tea harvest, the summer and fall harvests also increased. Both the national yearend statement and the claims of nearly all of the major producing provinces report that 1977 production increased over the good 1976 crop.

Tea exports probably increased in 1977, and are expected to rise again in 1978. PRC tea exports to the United States have shown a steady increase in 1976 and 1977, climbing to 4,216 tons in 1977. (*Carolyn L. Whitton*)

Livestock Development Sluggish

The livestock industry made little, if any, perceptible gain in 1977. The vague statement in the New Year editorial that in 1977 "progress was also registered in...animal husbandry..." was in marked contrast to the "fairly big progress" reported for animal husbandry in 1976. In the absence of more detailed estimates and only an occasional provincial claim for livestock numbers during 1977, the national statement indicates that progress registered during the year was meager at best. However, progress was evident in some ongoing programs, including pasture and grassland improvement, improving breed strains through crossbreeding, extension of veterinary services, expansion of irrigation facilities in pastoral areas, and improvements in artificial breeding techniques.

Animal husbandry began the year in an improved position and various reports indicated a

Table 7--Cotton imports, People's Republic of China, by country of origin, 1971-76 1/

Country of origin	Year beginning August 1					
	1971	1972	1973	1974	1975	1976
			1,000 metric tons			
Brazil	--	29.2	7.6	--	7.6	4/1.5
Egypt	17.0	13.9	7.4	8.5	25.0	5/1.7
El Salvador	--	--	0.2	--	8.3	4.4
Iran 2/	8.1	44.0	2.4	5.4	21.1	6/5.9
Kenya 3/	2.6	3.9	4.4	0.4	--	--
Mexico	15.9	24.2	24.2	5.9	5.4	16.7
Morocco	2.2	5.4	1.1	--	--	--
Nicaragua	--	--	18.3	6.7	18.3	17.9
Pakistan	18.1	25.9	2.0	20.7	9.4	7/--
Sudan	37.2	41.8	33.3	3/17.0	3/19.4	3/13.1
Syria	15.0	16.3	28.3	8.1	46.8	28.1
Tanzania	15.5	30.0	41.8	1.1	6.1	2.4
Turkey	14.2	50.9	12.8	--	3.0	2.0
Uganda	5.2	7.0	3.3	2.2	2.6	--
United States	--	127.4	195.5	66.8	1.7	--
Other	--	5.2	3.0	1.1	8.1	18.3
Total	150.9	425.2	385.6	143.9	182.9	111.9

Note: -- means none or negligible.

1/ Marketing years beginning August 1 unless noted otherwise. Data as reported by exporting countries.

2/ Year beginning July 23.

3/ Calendar year.

4/ August - June only.

5/ August - October only.

6/ August - March only.

7/ August - June only.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Foreign Agriculture Circular FC 1-78.

Table 8--Sugar imports, People's Republic of China, by country of origin, 1970-77

Country of origin	1970	1971	1972	1973	1974	1975	1976 1/	1977 1/
	1,000 metric tons, raw value							
Cuba	530	464	295	302	359	183	254	100
Australia	0	0	37	66	31	37	225.5	275
Brazil	0	0	411	195	4	72	0	168
Phillipines	0	0	0	0	0	11	79	367
Thailand	0	0	0	0	0	0	66	675
Others	0	0	6	0	21	10	10	10
Total imports	530	464	749	563	411	313	635	1,595
Exports	88	117	156	155	53	94	24	
Net imports	443	347	593	581	358	219	603	

1/ Preliminary.

Sources: International Sugar Organization, Statistical Bulletin, No. 11, Nov. 1977, p. 29. USDA Agricultural Attache Reports, Partner Country Trade Statistics, USDA estimates.

high birth rate and survival rate of young livestock resulting from improved and expanded shelters and a larger supply of improved fodder. Both of these improvements, together with better husbandry techniques at lambing and calving time, held losses of young livestock to a minimum despite the reported extreme cold weather and blizzards during the winter and spring.

The onset of drought on grasslands and pastures later in the year, however, apparently negated most earlier gains in many parts of grassland animal husbandry where sheep and goats are predominant. Efforts to increase the number of large animals (principally draft) appear no more successful. There were no provincial reports supporting increases in the number of large animals (horses, cattle, and buffaloes), despite intentions to increase the number of these animals.

Very little official national information was noted during the year on the progress of previously announced programs to further increase pig and poultry production through the expansion of mechanical feeding and other operations associated with expanding those categories of livestock, but some provinces claimed success. No national claims were made for pig production in 1977, although the goals of one pig per mou of cultivated land or one per person persisted during the year. Some provincial reports indicated mixed results. Emphasis was continued on cooperation of commune, brigade, work team, and peasants in the raising of pigs. But collectivized raising of pigs has been only moderately successful. Fukien Province, for example, reported that two-thirds of the production teams did not raise pigs collectively, and in Chekiang Province only 17.4 percent of the pigs were in state collectives. Although these reports describe more extreme than typical situations, they do indicate that collective pig raising has been only partially successful.

The overall programs for livestock improvement in breeding, increasing feed stocks of both fodder and concentrates, veterinary services, and pastureland development should show considerable progress in 1978, especially if the weather remains favorable. So far in 1978 grasslands and pasture areas have experienced improved weather conditions in terms of both more precipitation and higher temperatures. As a result, the crop of new, young livestock should have improved over the previous year. Higher precipitation should improve both early and late season fodder conditions. Improved veterinary services are expected to be an added plus factor in a year that, at the outset, holds more promise for China's livestock than recent years.

Also of interest during 1978 and subsequent years will be China's implementation of recently announced policies to mechanize or semi-mechanize pig and poultry operations in urban areas and to strive for self-sufficiency in livestock supplies in those areas. (*Marion R. Larsen*)

AGRICULTURAL INPUTS

Fertilizer Production Up Sharply

Chemical fertilizer production advanced sharply in 1977, with national production up a reported 30 percent over the previous peak in 1975. This places 1977 production at over 7 million tons (nutrient weight). Since fertilizer imports during 1977 increased over those of 1976 and apparently exceeded the 1975 level of 1.15 million tons of nutrient, total domestic supply of chemical fertilizer in 1977 may have topped 8.5 million tons, about 30 percent above the previous 1975 peak.

The increase in production during the year largely resulted from increased capacity. China reported that fertilizer capacity in 1977 increased more than in any year since 1949. The largest share of this was an increase in nitrogen production capacity. The PRC has purchased 13 foreign synthetic ammonia-urea complexes; by midyear 6 of these were reported in operation. Construction of locally run, small-scale plants has also continued. A total of 100 new fertilizer plants was reported to have been put into operation during the year, most of which were local small-scale plants.

No information was released on the composition of 1977 fertilizer production. Efforts have been underway to increase domestic production of both potassium and phosphorous fertilizer. But the surge in nitrogenous fertilizer production and the continued predominance of nitrogen in fertilizer imports has increased the nutrient imbalance in domestic production and consumption.

Fertilizer production should continue to increase rapidly during the next several years as the remaining imported urea plants come into full production; 1980 production has been targeted at 58 percent over 1977 levels. There is some question as to whether this target is feasible. But if it is achieved, 1980 production will be well above 11 million tons (nutrient weight). This implies fertilizer application of over 110 kg. per hectare of cultivated area from domestic production alone. Application per hectare of sown area would be considerably less, however, because of extensive

multiple cropping. This doubling of domestic production between 1975 and 1980 would provide a considerable impetus to crop production. However, it should also generate pressures for increased imports of potassium and phosphorous fertilizer because of the growing preponderance of nitrogenous fertilizer in domestic production. (*Frederic M. Surls*)

Farmland Capital Construction Stresses Irrigation

The progress made in farmland capital construction in the 1976/77 season compares favorably with that of previous seasons.[3] However, due to diversion of labor to field watering and management during the spring drought and subsequent heavy rains, manpower devoted to farmland capital construction dropped back to the 1975 level. Thus, 1977 was not a record farmland capital construction season.

No reports were made for numbers of projects completed in 1977. Because of the drought, the major emphasis in farmland capital construction temporarily shifted to irrigation. As a result, the number of pump wells in the northern wheat areas increased and 2.7 million hectares of existing irrigation systems were improved, an unusually large increase.

The total irrigated area in 1977 was reported to be 3 times the 1949 figure, or 48 million hectares. This is near the 1980 goal of irrigation of half the total cultivated area of 100 million hectares. But, it is not an unusually large increase over the 1976 total irrigated area because efforts during the year focused on improving existing systems rather than expanding total irrigated area.

Reports for 1977 suggest that land reclaimed remained at about the same low level of the previous two seasons, while land leveled was slightly less than the previous season. No claim was made for terracing or transformation of low-yielding to high-stable-yielding fields, suggesting that emphasis was temporarily diverted from longer range land improvement goals in the 1977 season.

In July, the National Farmland Capital Construction Conference reiterated the major 1980 land improvement goal of 1 mou of high-stable-yielding fields per capita of the rural population that was first announced by Vice Premier Chen Yung-kuei at the December 1976 Tachai Conference. This goal implies a 1980 target of 47-54 million hectares of high-stable-yielding fields, a substantial increase over the 34 million hectares reported in 1975. Aside from this ambitious goal, the remainder of this conference and the major policy statements following it continued to stress Tachai-type farmland construction in 1978 and beyond as a prerequisite to agricultural mechanization and increased agricultural production.

So far, the 1978 season appears to be progressing at least at the same rate as the previous seasons. With the improvement in weather that is apparent this spring, farmland capital construction in the 1977/78 season should return to emphasis on its long-run goals of field preparation for mechanization and higher yields. (*Carolyn L. Whitton*)

Farm Machinery Production Increases

Farm machinery production, particularly that of tractors and hand-tractors, increased in 1977 over its poor performance in 1976. The First Ministry of Machine Building, which directs farm machinery production, reported its total value of output for 1977 not only exceeded the plan, but reached an all-time high. Such an advance in farm machinery production can be explained by the increased emphasis placed on agricultural mechanization in 1977.

In 1977, there were several important conferences and speeches on agricultural mechanization, each reemphasizing the target of basic mechanization of 70 percent of agricultural operations by 1980 and providing additional detailed steps to meet this target (table 3). A new target, 85-percent mechanization by 1985, was also announced in early 1978.

Emphasis continues to be put on production of tractors, hand-tractors, diesel engines, tractor attachments, and irrigation and drainage equipment. Tractors, hand-tractors, and diesel engines have been singled out for serialized production in 1978-80, with priority in 1978 going to hand-tractors and small diesel engines.

An increase in the ratio of tractors to total farm machinery was targeted for 1980. The large average annual increases in tractor and hand-tractor production in recent years suggest that total production remains low enough to achieve rapid growth in the short run. However, as production continues to grow, competition with other sectors of the economy for limited raw materials—particularly steel—will become more acute and the PRC will be hard pressed to achieve its 1980 and 1985 targets.

Increasing attention to centralization of control over agricultural machinery production and to specialization and standardization of production is apparent. Five large farm machinery plants were put into operation in 1977, while the number of smaller commune and brigade-run enterprises increased more slowly.

[3]The farmland capital construction season runs from fall harvest to September of the following year.

Reports in 1977 were unusually candid in discussing problems associated with mechanization. Much was said about problems of slow repair and long down time, spare parts shortages, and inadequate numbers of technicians and operators trained.

Imports of agricultural machinery also increased in 1977. For the first time, U.S. firms concluded agreements with the PRC for export of small amounts of irrigation equipment and tractors. PRC imports of agricultural machinery may increase somewhat in the future, but will likely remain small unless the PRC decides to import agricultural machinery for other than prototype purposes, which is still unlikely. (*Carolyn L. Whitton*)

FOREIGN TRADE UP

China's foreign trade in 1977 showed the first significant increase in 3 years, as total trade turnover (exports plus imports) rose by 10 percent. For the second consecutive year, China's trade surplus is estimated to be about $1 billion (table 9). By the end of the year, China's foreign exchange position was much improved over that of the past several years.

The stagnation in PRC trade levels, which lasted through early 1977, resulted from a combination of debt repayment pressures, politically related domestic economic disruptions, and unresolved questions over economic priorities. By the end of 1977, economic conditions were improved, many policy issues resolved, and repayment pressures reduced. China seems on the verge of a renewed expansion of foreign trade in the next several years. The recently signed Sino-Japanese long-term trade agreement, calling for a considerable rise in nonagricultural trade between the two countries, is one indicator of the new direction of trade.

However, the major push in China's foreign trade is likely to be in the area of imports of industrial goods and technology. Moreover, there is no indication of a basic change in China's conservative financial policies, which have favored limited use of relatively short-term credits in financing imports. Under these conditions, future export growth and foreign exchange limitations are likely constraints on import growth.

Since agricultural imports compete with high priority industrial goods for scarce foreign exchange resources, it seems unlikely that the PRC is planning on large increases in agricultural imports in years to come. Agricultural imports will continue to be largely a safety valve for meeting shortfalls in domestic production and will fluctuate substantially from year to year.

Agricultural Trade Rises

Agricultural imports were sharply higher in 1977, after falling in 1976 to the lowest levels since 1972 (table 9). The rise in agricultural imports, a probable near doubling in value from 1976 levels, was responsible for much of the total growth in PRC imports during 1977. All major import categories—grains, soybeans, edible oils, sugar, and cotton—increased sharply on the year, and wheat, edible oil, and sugar imports reached record levels (table 10). The overall growth in agricultural imports stemmed primarily from sluggish production growth in 1976 and 1977 and also most likely from China's easing payments position as the year progressed. Low prices in world markets for some commodities may also have been a factor. There was no indication from Chinese sources that the surge in imports reflected a basic change in policy towards agricultural imports.

On the export side, there is insufficient data to assess the change in agricultural exports during 1977. Major export categories such as rice and soybeans were off for the year. But exports of livestock and livestock products to Hong Kong, China's major market, held their own. It seems likely that tight domestic supplies for many goods prevented a significant increase in total agricultural exports for the year.

China's agricultural imports will remain at high levels in 1978, reflecting the poor 1977 harvest. Grain imports for the year could easily exceed those of 1977. Cotton imports are expected to rise, and vegetable oil imports should be at above-average levels, although most likely below those of 1977. On the export side, higher rice exports seem likely and total agricultural exports should rise somewhat above 1977 levels.

PRC Resumes Agricultural Purchases From the United States

U.S. exports to the PRC in 1977 reached $173.1 million, 31 percent up from 1976 levels. Nonagricultural exports were down for the year; the rise in trade was due to the first significant agricultural sales to the PRC since 1975. The value of U.S. agricultural exports to China during 1977 totaled $65.8 million, sharply above the $44,000 total recorded in 1976 but well below the record $664 million level of 1974. Cotton, soybeans, and soybean oil were the major export items on the

Table 9--Foreign trade indicators, People's Republic of China, 1971-77

Item	1971	1972	1973	1974	1975	1976	1977
				Million U.S. dollars			
Total PRC trade 1/:							
Total exports	2,455	3,150	5,075	6,660	7,180	7,250	6/7,900
Agricultural exports 2/	980	1,290	2,140	2,605	2,815	2,645	NA
Total imports	2,310	2,850	5,225	7,420	7,395	6,005	6/6,900
Agricultural imports 2/	485	730	1,680	2,370	1,355	950	NA
Overall trade balance	145	300	(150)	(760)	(215)	1,245	6/1,000
Hard currency trade balance 3/	60	95	(440)	(1,185)	(585)	1,115	NA
U.S.-PRC trade 4/:							
Exports to PRC	--	63.5	739.7	818.7	303.6	135.2	171.3
Agricultural exports to PRC 5/	--	61.3	625.6	664.3	79.7	--	65.8
Imports from PRC	5.0	32.4	64.9	114.7	158.3	201.9	202.7
Agricultural imports from PRC	4.0	16.4	21.6	26.4	28.2	55.0	67.1

NA = Not available. ( ) = negative number.
-- = None or negligible.

1/ Exports f.o.b., imports c.i.f. Derived from partner-country trade data and estimates. Data are taken or derived from Central Intelligence Agency, People's Republic of China: International Trade Handbook, various issues.

2/ Rough estimates intended only to provide an indication of orders of magnitude. Agricultural and nonagricultural commodities could not be completely separated.

3/ Trade with non-Communist countries is used as a proxy for hard currency trade. This introduces some error as some of this trade is on a barter basis and some trade with Communist countries may be settled in hard currencies.

4/ See tables 11 and 12 for source and breakdown by commodity.

5/ Includes the estimated value of U.S. agricultural goods transshipped through Canada.

6/ Preliminary U.S. Government estimate.

Table 10--Trade in major agricultural commodities, People's Republic of China, 1971-77

Item	1971	1972	1973	1974	1975	1976	1977
				1,000 metric tons			
Total grain imports	3,128	4,642	7,642	6,790	3,459	2,061	1/6,910
From:							
Argentina	107	14	5/ 158	735	172	--	850
Australia	33	--	768	1,318	1,352	934	1/2,957
Canada	2,988	3,687	2,398	1,772	1,922	987	1/3,103
United States 2/	--	941	4,315	2,759	--	--	--
Other	--	--	2	206	6/ 25	6/ 140	1/ --
Wheat imports	3,021	4,252	5,982	5,345	3,339	1,921	1/6,910
From:							
Argentina	--	--	--	145	65	--	850
Australia	33	--	768	1,318	1,352	934	1/2,957
Canada	2,988	3,687	2,398	1,772	1,922	987	1/3,103
United States 2/	--	565	2,815	1,905	--	--	--
Other	--	--	--	206	--	--	--
Corn imports	107	390	1,626	1,444	95	--	--
From:							
Argentina	107	14	126	590	95	--	--
United States 2/	--	376	1,500	854	--	--	--
Rice exports	924	899	2,142	1,983	1,440	900	1/700
Soybean exports	460	370	310	1/340	1/330	1/180	1/115
Soybean imports	--	2	255	619	36	25	362
Soybean oil imports	--	10	58	--	11	10	157
Sugar imports 4/	464	749	563	411	313	1/635	1/1,595
Cotton imports 3/	151	425	386	144	183	1/142	NA

NA = Not available.
-- = None or egligible.

1/ Preliminary.
2/ Direct exports plus transshipments through Canada.
3/ Marketing year beginning August 1 of year listed.
4/ Raw value.
5/. Includes 32 thousand tons of sorghum.
6/ All rice.

Sources: Partner Country Trade Statistics. ESCS/FAS estimates. Tables 5, 6, 7, 8.

Table 11--U.S. agricultural exports to the People's Republic of China, by calendar years, 1972-1977 1/

Item	1972	1973	1974	1975	1976	1977
			1,000 metric tons			
Wheat	565	2,815	1,905	--	--	--
Corn	376	1,500	854	--	--	--
Tobacco	--	1	1	--	--	--
Hides and skins 2/	--	35	20	--	--	1
Soybeans	--	251	619	--	--	55
Cotton	--	138	178	60	--	12
Tallow, inedible	--	3	18	--	--	8
Soybean oil, crude	10	58	--	--	--	62
			1,000 dollars			
Wheat	35,293	307,508	234,015	--	--	--
Corn	23,792	141,175	95,671	--	--	--
Tobacco	--	1,359	2,718	--	--	--
Hides and skins	--	391	121	--	--	12
Soybeans	--	55,396	138,242	9	--	16,179
Cotton	--	100,527	185,934	79,658	--	17,519
Tallow, inedible	--	1,344	7,539	--	--	3,690
Soybean oil, crude	2,200	17,863	--	--	--	28,297
Others	--	43	42	22	44	79
Total agricultural	61,284	625,605	664,282	79,689	44	65,775
Total nonagricultural	2,252	114,128	154,377	223,947	135,156	105,543
Total exports	63,537	739,733	818,659	303,636	135,200	171,318

Note: -- means none or negligible.

1/ Exports include transshipments of agricultural products through Canada.
2/ Numbers in thousands.

Source: U.S. Bureau of the Census, U.S. Agricultural Exports, country by commodity, various printouts, 1974-77. U.S. Dept. of Agr., Econ., Stat., and Coop. Serv., U.S. Foreign Agricultural Trade Statistical Report, various issues.

year, although the United States also sold small quantities of hides and skins and inedible tallow for the first time since 1974 (table 11). No U.S. grains were sold during the year, despite a record level of PRC wheat imports.

U.S. agricultural imports from China during 1977 continued their steady rise, increasing 22 percent over 1976 to a total of $67 million. The leading import item continued to be feathers and down, which accounted for nearly 30 percent of all agricultural imports from China. But, significant amounts of bristles, nuts (mainly cashews), tea, and essential oils were also imported. With nonagricultural imports dropping during the year, the share of agricultural products in total U.S. imports from China reached 33 percent (table 12).

The rise in agricultural exports to the PRC in 1977 seems to illustrate the apparent U.S. role as a residual supplier of agricultural products to China. Since the reopening of trade with China in the early 1970's, the United States has made substantial sales of agricultural products to China only during years of high total PRC agricultural imports. It appears that the PRC turns to the United States for agricultural products primarily when supplies are tight elsewhere or there are price or delivery problems with other suppliers. As long as this continues to be the case, U.S. sales to China will fluctuate more sharply than total PRC agricultural imports.

With PRC agricultural imports continuing at high levels in 1978, U.S. agricultural exports should continue to be up and will substantially exceed 1977 levels. Cotton deliveries in excess of $100 million have already been contracted for shipment between January and August. Some sales of soybean oil and soybeans are possible later in the year. The largest boost to U.S. agricultural exports to the PRC in 1978 will come from the resumption of grain shipments to China following the first PRC purchase of U.S. grain since 1974.
(*Frederic M. Surls*)

OUTLOOK

Prospects for agriculture in 1978 appear more favorable than last year. Generally normal-to-above-normal temperatures and precipitation existed throughout most of the agricultural areas in China from fall 1977 to early spring 1978. Over-wintering crops, particularly wheat, were off to a good start. Weather was also more favorable to early rice than in 1976 and 1977. Rapeseed was also reported growing well in the South.

Some part of Chinese agriculture has problems every year, and this year is no exception. But, although there has been excess rain in some areas and drought in others, damage appears localized in contrast to the widespread weather damage in the spring of 1977. There have been problems for the over-wintering crops. Because of the warmer-than-normal winter, over-wintering wheat tended to grow excessively, increasing susceptibility to winter-kill and tending to overtax water and fertilizer in the soil. The warm winter weather also brought increased threats of damage by insects and disease. In addition, temperatures dropped to below freezing during the first 2 or 3 days in April in some areas of the North China Plain. This was followed by unseasonably hot and dry weather during mid-April which caused rapid loss of soil moisture and damage to over-wintering wheat. The most serious problem has been worsening drought in North China since mid-March. This has stressed non-irrigated wheat and is a potential threat to the important fall harvest in this area.

There is also some question whether area sown to over-wintering wheat is down from last year. Three major over-wintering wheat producing provinces—Honan, Hopeh, and Shantung—reported sown areas similar or equal to those of the 1977 season. But, even if the sown area of over-wintering wheat is down slightly, yields per hectare and total area harvested should be above 1977 levels. Weather has been good in spring wheat areas. Consequently, total wheat production should be above the 1977 level but is unlikely to surpass the 1976 record.

Cloudy and cool weather in south China slowed transplanting of early rice. Excess rains in the south have caused some damage to seedlings. But problems for rice this year have been less severe than in either 1976 or 1977.

Of course, if weather continues poor through fall, 1978 could be another bad year. But, many factors suggest that, if weather improves somewhat, this could still be a good year for China's crops. Political stability and a concerted drive to raise grain production provide a more favorable environment than in past years. This determination by the leadership was shown in the announcement at the Fifth NPC of the 1985 goal of producing 400 million tons of grain and also by Vice Minister of Agriculture Ho Kang's exhorting the rural masses to strive for an annual increase of 15 million tons of grain between 1978 and 1985.

In addition to favorable political conditions, agricultural inputs, particularly of fertilizer, will be up in 1978. Total 1977 fertilizer production and supplies were about 30 percent over the 1975 peak, and there will be further increases in 1978. Moreover,

Table 12--Major U.S. agricultural imports from the People's Republic of China, 1973-77

Commodity	Unit	Quantity					Value				
		1973	1974	1975	1976	1977	1973	1974	1975	1976	1977
		Thousands					1,000 dollars				
Meats, rabbit, n.e.s., fresh, chilled frozen	lb.	428	505	1,761	874	575	192	274	860	367	275
Eggs, not chicken, whole	doz.	64	106	297	287	284	76	137	312	324	356
Seeds for planting	lb.	22	166	671	127	159	4	44	196	61	64
Vegetables, fresh, chilled, frozen	do.	571	560	762	652	575	122	162	280	222	187
Vegetables, dried, dehydrated	do.	248	1,460	653	1,452	1,931	177	869	412	613	1,134
Vegetables, packed in salt, brine, pickled, or prepared		666	691	1,726	1,618	1,230	224	240	467	434	469
Mushrooms	do.	210	210	66	115	44	120	118	61	91	59
Nuts, edible	do.	1,317	489	1,706	5,203	3,798	773	328	1,039	3,795	5,561
Fruits, edible, fresh, dried, preserved		395	719	930	1,196	1,903	165	304	507	479	1,067
Honey	do.	621	946	459	560	636	230	360	152	172	200
Tea	do	1,279	2,736	4,608	6,716	9,295	613	1,017	1,979	2,874	5,186
Cassia and cinnamon spices	do.	1,357	805	2,319	5,217	5,886	1,097	808	1,154	2,059	2,416
Other capsicum, cayenne red pepper	do.	1,571	3,133	3,971	3,821	2,780	315	999	1,365	1,738	1,527
Other spices and spice seeds	do.	204	413	1,637	2,961	1,175	49	166	512	991	597
Tobacco, unmanufactured		13	520	1,542	180	53	5	434	1,120	73	5
Tung oil	do.	5,721	346	6,413	10,120	--	705	102	1,580	2,223	--
Other vegetables and nut oils	do.	35	893	580	710	51	23	234	325	204	55
Food preparations	do.	965	1,191	2,094	3,209	3,649	386	562	872	1,386	1,841
Feathers and downs	do.	1,054	1,017	2,372	8,936	6,668	1,728	1,949	3,255	14,265	18,978
Bristles, crude or processed	do.	1,110	1,129	647	2,493	2,543	5,144	5,925	3,294	8,049	8,719
Hair, horse, cattle, coarse animal, uncombed	do.	156	156	156	317	609	383	535	550	553	1,120
Hair, camel	greasy lb	469	412	254	238	321	334	672	465	389	809
Hair, cashmere, goat	do.	350	258	265	989	1,430	507	695	478	1,913	3,205
Silk, raw	lb.	432	206	353	496	268	4,394	2,576	3,039	3,948	2,343
Drugs, natural	do.	80	110	143	194	343	466	525	646	959	1,487
Essential oils	do.	1,057	1,502	553	2,224	1,001	1,545	4,048	2,013	3,498	5,115
Gelatin, inedible	do.	8,623	3,609	440	4,980	6,482	1,255	1,189	370	1,088	1,149
Other agricultural commodities							599	1,132	890	2,211	3,191
Total agricultural commodities							21,631	26,404	28,193	54,979	67,115
Total nonagricultural commodities							43,269	88,296	130,147	146,921	135,585
Total imports							64,900	114,700	158,600	201,900	202,700

-- = none or negligible.

Sources: U.S. Department of Commerce, Bureau of the Census, U.S. Agricultural Imports, country by commodity, 12/31/73, 1/1/75, 12/31/75, 12/31/77; U.S. Department of Commerce, Bureau of the Census, U.S. Foreign Trade, Highlights of Exports and Imports, FT 990-76-12, Table 1-4A; U.S. Department of Agriculture, Economics, Statistics, and Cooperatives Service, U.S. Foreign Agricultural Trade Statistical Report, calendar 1973 and 1974 issues.

irrigation facilities and farmland capital construction are expected to expand. All of these can significantly raise yields of major grain crops.

While additional irrigation and chemical fertilizers would raise the yields of wheat and miscellaneous grains in the North, expanded use of a new hybrid rice variety will tend to increase rice output. This newly developed rice strain, which can be grown widely as early, intermediate, or late rice, reportedly increased yield about an average of 1 ton per hectare. Area transplanted with hybrid rice has expanded rapidly, rising from 138,000 hectares in 1976 to over 2 million hectares in 1977. The planned 1978 area is over 6 million hectares.

If weather conditions improve for the remainder of the growing season, the 1978 harvest could be significantly above the record 1976 harvest of 272 million tons.

China's foreign exchange and payments position has improved substantially, and foreign trade should grow sharply in 1978 now that economic priorities have been determined and the 10-Year Plan has been finalized. Most growth will be in nonagricultural goods as the new plan puts heavy emphasis on technology imports. But, agricultural imports on the year will remain at high levels, primarily because of the inadequate harvest in 1977. Grain imports will remain substantial—7 million tons or more are expected during calendar 1978. Cotton imports during marketing year 1977/78 will be at unusually high levels, compared with the past several years, as total imports of 1.5 million bales are projected for the year. High levels of edible oil imports are also expected, although the total will likely be somewhat below the 159,100 tons imported in 1977. Sugar imports should also be down from their record level of last year. The level of soybean imports is uncertain.

On the export side, some increase in agricultural exports is expected. Rice exports, in particular, may increase to more than 1 million tons during calendar 1978.

As a result of the high level of PRC agricultural imports during the year, the United States will have its best year for agricultural sales to the PRC since 1974. Total exports will rise considerably above the $65.8 million level of 1977. Major exports during the year will be cotton, grains, soybean oil, and, if the PRC continues to import large amounts during the year, soybeans. (*Charles Y. Liu*)

Appendix table 1--Provincial level unit claims of total grain production, People's Republic of China, 1975-77 1/

Administrative unit	1975	1976	1977
Northwest			
Shensi	(10)	+	-
Kansu	10	-	-
Inner Mongolia	-	13	-
Ningsia	+	-	24
Sinkiang	15	+	-
Tsinghai	10	(10)	++
Southwest			
Szechwan	-	-	10+
Yunnan	-	-	-
Kweichow	-	-	24
Tibet	8	7.8	5
South			
Kwangsi	5	6	-
Kwangtung	-	+	++
Fukien	+	-	8.3
Central			
Hunan	6.5	++	++
Kiangsi	+	=	++
Hupeh	10	++	-
East			
Chekiang	-	-	-
Anhwei	5	10	-
Kiangsu	-	8	-
Shanghai	-	-	-
North			
Honan	-	++	++
Shantung	10	10+	-
Hopeh	=	++	-
Peking	+	++	-
Tientsin	-	-	-
Shansi	10	++	-
Northeast			
Liaoning	(10)	-	++
Kirin	5	-	8.8
Heilungkiang	5	-	10+
Provinces claiming increases	18	16	13

1/ All data from PRC sources. Figures and symbols in columns are comparisons with the previous year. Figures are percentages as reported. A plus represents an increase and a double plus a record, a minus sign represents a decrease and an equal sign means no change. Parenthesized figures are not full value but about or almost. A figure followed by a plus sign is greater than. Minuses are judgmental interpretations based on an analysis of official statements regarding the total grain crop. No official claim or no report by a province was interpreted as no gain and in most instances a reduction.

Appendix table 2--Area, yield, and production of total grains, People's Republic of China, 1949-77 1/

Year	Total grain			Rice			Wheat			Miscellaneous grains 2/			Tubers 3/		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
	Million hectares	Kg./ha.	Million tons	Million hectares	Kg./ha.	Million tons	Million hectares	Kg./ha.	Million tons	Million hectares	Kg./ha.	Million tons	Million hectares	Kg./ha.	Million tons
1949	101.6	1,064	108.1	25.7	1,891	48.6	21.5	642	13.8	47.4	755	35.8	7.0	1,400	9.8
1950	104.8	1,190	124.7	26.1	2,111	55.1	22.8	636	14.5	48.2	887	42.7	7.7	1,610	12.4
1951	107.0	1,262	135.0	26.9	2,253	60.6	23.1	745	17.2	48.7	887	43.2	8.3	1,687	14.0
1952	112.3	1,375	154.4	28.4	2,408	68.4	24.8	730	18.1	50.4	1,022	51.5	8.7	1,885	16.4
1953	114.3	1,373	156.9	28.3	2,516	71.2	25.6	715	18.3	51.3	988	50.7	9.0	1,844	16.6
1954	116.3	1,379	160.4	28.7	2,467	70.8	27.0	867	23.4	50.9	967	49.2	9.8	1,735	17.0
1955	118.4	1,476	174.8	29.2	2,671	78.0	26.7	861	23.0	52.4	1,050	55.0	10.0	1,890	18.9
1956	124.3	1,468	182.5	33.3	2,474	82.4	27.3	908	24.8	52.7	1,013	53.4	11.0	1,982	21.8
1957	120.9	1,530	185.0	32.2	2,696	86.8	27.5	858	23.6	50.6	1,040	52.6	10.5	2,086	21.9
1958	121.3	1,649	200.0	32.7	2,844	93.0	26.6	940	25.0	45.6	1,140	52.0	16.3	1,840	30.0
1959	108.8	1,516	165.0	29.7	2,660	79.0	24.3	988	24.0	42.3	969	41.0	12.5	1,680	21.0
1960	119.0	1,260	150.0	31.5	2,317	73.0	26.8	784	21.0	47.4	760	36.0	13.3	1,504	20.0
1961	118.9	1,364	162.0	31.0	2,516	78.0	24.6	650	16.0	49.2	894	44.0	14.1	1,702	24.0
1962	118.9	1,463	174.0	29.3	2,662	78.0	24.4	820	20.0	52.0	1,019	53.0	13.2	1,742	23.0
1963	118.7	1,542	183.0	28.2	2,837	80.0	24.2	909	22.0	53.0	1,057	56.0	13.3	1,880	25.0
1964	121.8	1,642	200.0	29.5	3,051	90.0	25.5	980	25.0	54.2	1,089	59.0	12.6	2,063	26.0
1965	122.6	1,631	200.0	29.8	3,020	90.0	25.5	980	25.0	54.3	1,105	60.0	13.0	1,923	25.0
1966	123.9	1,735	215.0	30.3	3,168	96.0	25.0	1,120	28.0	56.0	1,178	66.0	12.6	1,977	25.0
1967	127.1	1,810	230.0	30.3	3,300	100.0	25.5	1,098	28.0	58.5	1,299	76.0	12.8	2,031	26.0
1968	127.9	1,681	215.0	30.0	3,167	95.0	25.0	1,000	25.0	60.4	1,159	70.0	12.5	2,000	25.0
1969	129.1	1,704	220.0	30.6	3,235	99.0	25.3	1,067	27.0	60.3	1,144	69.0	12.9	1,938	25.0
1970	129.8	1,849	240.0	31.5	3,492	110.0	25.6	1,211	31.0	60.2	1,246	75.0	12.5	1,920	24.0
1971	131.3	1,874	246.0	32.9	3,556	117.0	25.9	1,197	31.0	60.2	1,246	75.0	12.3	1,870	23.0
1972	131.5	1,825	240.0	33.6	3,333	112.0	26.2	1,374	36.0	59.1	1,168	69.0	12.6	1,825	23.0
1973	132.6	1,885	250.0	34.4	3,430	118.0	26.5	1,321	35.0	59.5	1,227	73.0	12.2	1,967	24.0
1974	134.7	1,967	265.0	35.1	3,632	127.5	27.2	1,397	38.0	60.2	1,238	74.5	12.2	2,049	25.0
1975	136.5	1,978	270.0	35.5	3,563	126.5	27.7	1,480	41.0	61.2	1,266	77.5	12.1	2,066	25.0
1976	137.5	1,978	272.0	35.9	3,495	125.5	28.5	1,578	45.0	60.9	1,256	76.5	12.2	2,049	25.0
1977 4/	139.1	1,941	270.0	36.2	3,494	126.5	27.5	1,473	40.5	61.9	1,236	76.5	13.5	1,963	26.5
1978															
1979															
1980															

1/ Acreage and production data for 1949-57 are from Ten Great Years, People's Publishers, Peking, September 1959. Data for 1958-77 are USDA estimates based on information contained in official Chinese media and from official claims. Periodic revisions are made as additional information becomes available. Major revisions were made for acreage and production for rice, wheat, and miscellaneous grains for the period 1969-76 based on additional information received during 1977-78. See the table in previous annual installments in this series for a comparison of these revisions. Sums of individual grains may not equal total grain because of rounding.

2/ Miscellaneous grains include coarse grains (corn, barley, oats, rye, sorghum, and millet), pulses and other minor grains.

3/ Tubers include white and sweet potatoes, manioc, and taro on a grain-equivalent basis.

4/ Preliminary.

Appendix table 3--Area, yield and production of coarse grains, People's Republic of China, 1949-77 1/

Year	Total			Corn			Sorghum		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
	1,000 ha.	Kg/ha.	1,000 tons	1,000 ha.	Kg/ha.	1,000 tons	1,000 ha.	Kg/ha.	1,000 tons
1949	37,972	807	30,628	10,967	821	9,000	8,525	833	7,100
1950	38,445	942	36,204	11,499	1,023	11,760	8,583	948	8,141
1951	38,921	950	36,958	12,031	1,209	14,550	8,632	786	7,561
1952	40,495	1,082	43,828	12,916	1,340	17,310	8,922	1,015	9,056
1953	41,479	1,038	43,061	13,672	1,271	17,371	9,069	979	8,883
1954	41,413	1,010	41,840	13,515	1,302	17,600	9,256	917	8,484
1955	43,006	1,091	46,928	15,414	1,387	21,380	9,103	993	9,042
1956	43,536	1,064	46,321	18,618	1,306	24,324	7,964	988	7,871
1957	41,787	1,077	44,994	15,177	1,435	21,779	9,009	932	8,397
1958	38,359	1,175	45,065	16,500	1,435	23,673	7,361	1,050	7,729
1959	34,535	1,004	34,661	11,700	1,287	15,059	7,739	927	7,173
1960	38,285	795	30,444	11,845	1,098	13,000	8,970	711	6,379
1961	39,515	942	37,236	11,990	1,333	15,980	9,352	842	7,878
1962	39,597	1,132	44,838	12,135	1,573	19,090	9,302	1,037	9,643
1963	39,623	1,197	47,422	12,280	1,642	20,170	9,250	1,110	10,267
1964	39,641	1,262	50,027	12,425	1,718	21,340	9,190	1,184	10,881
1965	39,664	1,292	51,234	12,570	1,827	22,960	9,140	1,178	10,768
1966	39,683	1,416	56,180	12,715	1,893	24,070	9,083	1,382	12,556
1967	39,711	1,627	64,593	12,860	2,094	26,930	9,017	1,679	15,139
1968	39,716	1,501	59,622	13,005	1,898	24,680	8,970	1,593	14,289
1969	39,733	1,486	59,049	13,150	1,900	24,980	8,916	1,590	14,179
1970	39,746	1,623	64,525	13,295	2,121	28,200	8,860	1,738	15,398
1971	39,756	1,618	64,335	13,440	2,061	27,700	8,801	1,727	15,199
1972	39,673	1,500	59,512	13,500	1,890	25,515	8,669	1,712	14,845
1973	39,892	1,597	63,707	14,500	2,059	29,856	8,283	1,805	14,950
1974	40,118	1,656	66,429	15,500	2,144	33,232	7,903	1,877	14,835
1975	40,623	1,697	68,935	16,500	2,160	35,640	7,322	1,986	14,542
1976	41,132	1,662	68,380	17,500	2,021	35,370	7,006	2,020	14,150
1977	41,683	1,640	68,350	18,000	1,911	34,395	7,000	2,090	14,630
1978									
1979									
1980									

--Continued

Appendix table 3--Area, yield and production of coarse grains, People's Republic of China, 1949-77 1/--Continued

Year	Millet			Barley			Oats		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
	1,000 ha.	Kg/ha.	1,000 tons	1,000 ha.	Kg/ha.	1,000 tons	1,000 ha.	Kg/ha.	1,000 tons
1949	11,359	731	8,300	6,163	937	5,774	958	474	454
1950	11,227	822	9,233	6,136	1,064	6,532	1,000	538	538
1951	11,103	749	8,319	6,109	978	5,977	1,046	527	551
1952	11,284	857	9,672	6,250	1,130	7,064	1,123	646	726
1953	11,248	819	9,214	6,303	1,085	6,840	1,187	634	753
1954	11,241	760	8,544	6,184	1,042	6,445	1,217	636	767
1955	10,867	814	8,851	6,321	1,074	6,787	1,301	667	868
1956	9,310	804	7,490	6,294	928	5,839	1,350	590	797
1957	10,327	752	7,770	5,947	1,035	6,155	1,327	673	893
1958	8,473	847	7,176	4,828	1,132	5,467	1,197	852	1,020
1959	8,951	747	6,686	5,044	971	4,899	1,101	767	844
1960	10,422	572	5,965	5,810	725	4,210	1,238	719	890
1961	10,918	677	7,388	6,016	835	5,024	1,239	780	966
1962	10,911	831	9,071	5,936	1,001	5,944	1,313	830	1,090
1963	10,900	889	9,691	5,863	1,044	6,124	1,330	880	1,170
1964	10,890	946	10,300	5,788	1,084	6,277	1,348	912	1,229
1965	10,879	939	10,217	5,709	1,053	6,012	1,366	935	1,277
1966	10,872	1,069	11,618	5,630	1,172	6,601	1,383	965	1,335
1967	10,846	1,262	13,683	5,540	1,355	7,507	1,448	928	1,344
1968	10,854	1,165	12,643	5,469	1,225	6,698	1,418	925	1,312
1969	10,843	1,133	12,283	5,388	1,168	6,295	1,436	914	1,312
1970	10,835	1,207	13,081	5,303	1,222	6,482	1,453	951	1,382
1971	10,826	1,249	13,519	5,220	1,241	6,476	1,469	981	1,441
1972	10,915	1,116	12,177	5,184	1,088	5,640	1,405	950	1,335
1973	10,690	1,129	12,072	4,996	1,083	5,412	1,423	906	1,417
1974	10,466	1,127	11,794	4,808	1,063	5,113	1,441	1,012	1,458
1975	9,957	1,144	11,386	5,380	1,081	5, 818	1,464	1,058	1,549
1976	9,454	1,156	10,930	5,673	1,126	6,390	1,499	1,027	1,540
1977	9,298	1,178	10,950	5,898	1,163	6,860	1,487	1,019	1,515
1978									
1979									
1980									

1/ There is no known official series for individual coarse or miscellaneous grains for the period 1949-77. Figures in the above series are ESCS estimates but do include some official figures including many of the corn figures for the 1950's. Some official statements on corn, sorghum, and millet and observations on barley and other coarse grains by travelers to China provided guidelines and some benchmarks in recent years enabling a more up-to-date estimate for the various grains. Total coarse grains differ from miscellaneous grains in that the latter includes pulses and several other minor grains. Coarse grain estimates are based on miscellaneous grain production and scattered data on individual coarse grains. There is a discrepancy between coarse grain area arising from uncertainty about total national grain area. This cannot be resolved with available data.

Appendix table 4--Area, yield and production of soybeans and major vegetable oilseeds, People's Republic of China, 1949-77 1/

Year	Soybeans			Peanuts			Rapeseed			Cottonseed		
	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production	Area	Yield	Production
	1,000 hectares	kg./ha.	1,000 tons	1,000 hectares	kg./ha.	1,000 tons	1,000 hectares	kg./ha.	1,000 tons	1,000 hectares	kg./ha.	1,000 tons
1949	8,319	611	5,086	1,254	1,011	1,268	1,515	484	734	2,770	321	889
1950	9,602	864	8,125	1,344	1,294	1,739	1,423	480	683	3,786	366	1,386
1951	10,787	800	8,630	1,667	1,257	2,096	1,567	496	778	5,485	376	2,062
1952	11,679	815	9,519	1,804	1,284	2,316	1,863	500	932	5,576	468	2,610
1953	12,362	803	9,931	1,775	1,198	2,127	1,667	527	878	5,180	454	2,352
1954	12,654	718	9,080	2,097	1,320	2,767	1,706	515	878	5,462	390	2,130
1955	11,442	797	9,121	2,268	1,290	2,926	2,338	414	969	5,773	526	3,037
1956	12,047	850	10,234	2,583	1,292	3,336	2,165	426	923	6,256	462	2,890
1957	12,740	788	10,045	2,541	1,011	2,570	2,333	380	886	5,776	568	3,281
1958	9,850	1,066	10,500	2,373	1,180	2,800	2,528	435	1,100	5,723	560	3,205
1959	9,870	1,165	11,500	2,000	1,134	2,268	2,700	344	930	5,700	474	2,702
1960	9,300	882	8,200	1,820	1,022	1,860	2,900	347	1,005	5,300	342	1,813
1961	8,300	952	7,900	1,530	1,098	1,680	1,740	399	695	3,700	480	1,776
1962	7,900	975	7,700	1,520	1,072	1,630	1,390	447	621	3,400	588	2,000
1963	8,000	880	7,040	1,620	1,173	1,900	1,450	464	673	4,050	544	2,203
1964	8,300	836	6,940	1,880	1,218	2,290	1,600	519	831	4,500	666	3,000
1965	8,100	844	6,840	1,940	1,186	2,300	1,700	490	834	4,770	692	2,997
1966	8,000	850	6,800	2,000	1,180	2,360	1,750	500	876	4,700	770	3,620
1967	8,180	850	6,950	2,000	1,150	2,300	1,730	559	967	4,800	808	3,878
1968	8,000	810	6,480	1,900	1,132	2,150	1,710	548	937	4,750	762	3,620
1969	8,000	775	6,200	2,000	1,175	2,350	1,700	482	820	4,700	754	3,544
1970	8,000	862	6,900	2,100	1,262	2,650	1,750	563	985	4,800	833	3,998
1971	8,300	952	7,900	2,150	1,283	2,760	2,200	557	1,225	4,850	916	4,443
1972	9,100	956	8,700	2,200	1,136	2,450	2,500	586	1,465	4,900	868	4,253
1973	9,100	1,099	10,000	2,100	1,190	2,350	2,350	591	1,390	4,850	1,062	5,151
1974	8.800	1,079	9,500	2,150	1,302	2,800	2,500	528	1,320	4,850	1,031	5,000
1975	9,100	1,099	10,000	2,200	1,227	2,700	2,750	538	1,480	4,850	990	4,802
1976	9,000	1,000	9,000	2,200	1,250	2,750	2,800	450	1,260	4,900	959	4,700
1977	9,100	1,044	9,500	2,300	1,190	2,550	2,850	433	1,235	4,800	917	4,400
1978												
1979												
1980												

1/ Acreage and production data for 1949-57 from Ten Great Years, People's Publishers, Peking, Sept. 1959, and other official sources. Data for 1958-76 are ERS estimates. The 1971-76 data for soybeans, peanuts, and rapeseed have been revised.

Appendix table 5--Area, yield, and production of cotton, People's Republic of China, 1949-76 1/

Year	Area	Yield		Production	
	1,000 hectares	Kg./ha.	Bales/ha. 2/	1,000 m. tons	Million bales 2/
1949	2,770	160	.73	444	2.0
1950	3,786	183	.84	692	3.2
1951	5,485	188	.86	1,030	4.7
1952	5,576	234	1.07	1,304	6.0
1953	5,180	227	1.04	1,174	5.4
1954	5,462	195	.90	1,065	4.9
1955	5,773	263	1.21	1,518	7.0
1956	6,256	231	1.06	1,445	6.6
1957	5,776	284	1.30	1,640	7.5
1958	5,723	280	1.28	1,600	7.3
1959	5,700	237	1.09	1,350	6.2
1960	5,300	171	.78	905	4.2
1961	3,700	240	1.10	890	4.1
1962	3,400	294	1.35	1,000	4.6
1963	4,050	272	1.25	1,100	5.1
1964	4,500	333	1.53	1,500	6.9
1965	4,770	346	1.59	1,650	7.6
1966	4,700	385	1.77	1,810	8.3
1967	4,800	404	1.86	1,940	8.9
1968	4,750	381	1.75	1,810	8.3
1969	4,700	377	1.73	1,770	8.1
1970	4,800	416	1.91	2,000	9.2
1971	4,850	458	2.10	2,220	10.2
1972	4,900	434	1.99	2,125	9.8
1973	4,850	526	2.41	2,550	11.7
1974	4,850	515	2.37	2,500	11.5
1975	4,850	495	2.27	2,400	11.0
1976	4,900	480	2.20	2,350	10.8
1977	4,800	458	2.10	2,200	10.1

1/ Acreage and production data for 1949-57 are from Ten Great Years, People's Publishers, Peking, Sept. 1959, and from other official sources. Data for 1958-76 are USDA estimates. Production is in ginned weight.

2/ Bales are 480 pounds.

Appendix table 6--Total land and water construction, People's Republic of China, selected data, 1974/75-1976/77 1/

Item	Unit	1974/75	1975/76	1976/77
Labor investment	Millions			
Persons		100	150+	100
Cadres		1.0	1.5	1.0
Earth and stone work completed	Billion cubic meters	2/15	25	5/NA
Projects completed	Millions	3/1.5	4/NA	NA

1/ Data are season's final figures (through September), unless otherwise indicated.

2/ Figure revised from data published in The Agricultural Situation in the People's Republic of China and other Communist Countries, Review of 1975 and Outlook for 1976, For. Agr. Econ. Rep. No. 124, Econ. Res. Serv., U.S. Dept. Agr., Aug. 1976, p. 25.

3/ Data through end of June.

4/ Number of projects completed through end of the first quarter of 1976 are reported to have exceeded those of the previous peak, probably the year-earlier period.

5/ Through end of November claimed 4.2.

Appendix table 7--Annual additions of improved land, People's Republic of China, 1974/75-1976/77 1/

Item	1974/75	1975/76	1976/77
	Million hectares		
Land reclaimed	2/.40	.44	6/.45
Land leveled	5.3	4/7.3	6.6
Land terraced	1.13	5/1.26	NA
Land freed of waterlogging	2.0	2.6	NA
Low-yielding land transformed	3/1.2	4/1.7	NA
Low-lying land improved	NA	4/.43	7/.53

NA = Not available.

1/ Data are season's final figures (through September) unless otherwise indicated.

2/ Data through the end of June only.

3/ Figure revised from data published in The Agricultural Situation in the People's Republic of China, Review of 1975 and Outlook for 1976, For. Agr. Econ. Rep. No. 124, Econ. Res. Serv., U.S. Dept. Agr., Aug. 1976, p. 25.

4/ Data through the end of April only.

5/ Data through the end of February only.

6/ Data through the end of November only; may include some land terraced.

7/ Data through the end of December only.

Appendix table 8--Totals of various water facilities and equipment, People's Republic of China, 1949, 1965, and 1972-77 1/

Year	Irrigation and drainage equipment	Large and medium reservoirs	Total reservoirs	Pump wells	Small and medium power stations
	Million horsepower	Number	Number	Millions	Thousands
1949	2/.88-1.18	2/10-20	NA	NA	0
1965	3/9.1	2/1,400	2/14,000	2/.1	2/5.6-6.0
1972	NA	NA	NA	2/.7	NA
1973	30	2,000	NA	1.2	NA
1974	30	2,000	NA	1.3	50
1975	40	2,000	70,000	1.7	60+
1976	NA	NA	70,000	1.8	62+
1977	4/47	2,000+	70,000+	1.8+	5/
1978					
1979					

NA = Not available.

1/ See The Agricultural Situation in the People's Republic of China, Review of 1975 and Outlook for 1976. For. Agr. Econ. Rept. No. 124, Econ. Res. Serv. U.S. Dept. Agr., Aug. 1976, p.26, for definitions of sizes of water equipment.

2/ Derived from reported increases.

3/ Revised on basis of 1977 report for 1965.

4/ One source claimed 50, apparently a rounded figure.

5/ 56,000+ small; but no claim for medium.

CONVERSION EQUIVALENTS

Common Chinese measures	*English equivalent*	*Metric equivalent*
1 mou (1 ko in Tibet)	0.1647 acres	0.0667 hectares
1 liang (tael)	0.1102 lb.	0.0500 kilograms
1 jin (catty)	1.1023 lb.	0.5000 kilograms
1 tan (picul)	110.23 lb.	50.00 kilograms
1 catty per mou	6.693 lb./acre	7.5 kilograms/hectare
1 picul per mou	669.3 lb./acre	0.75 tons/hectare

Conversion factors

One kilogram	equals	2.2046 pounds
One centner or metric quintal	"	220.46 pounds
One metric ton	"	2,204.6 pounds
One hectare	"	2.471 acres

Pounds per bushel

Wheat, potatoes, and soybeans	60
Rye and corn	56
Barley	48
Oats	32

Metric equivalents

One bushel	*Metric tons*
Wheat, potatoes, and soybeans	.02722
Rye and corn	.02540
Barley	.02177
Oats	.01452

One metric ton	*Bushels*
Wheat, potatoes, and soybeans	36.743
Rye and corn	39.368
Barley	45.929
Oats	68.894

One metric ton of ginned cotton = 4.593 bales of 480 pounds; or 4.409 running bales of 500 pounds.

North Korea: 1 chongbo equals 2.45 acres or 0.99174 hectares.

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